State of the Parks

1990 Report

CANADA'S GREEN PLAN

Environment Canada
Parks Service

Environnement Canada
Service des parcs

This first *State of the Parks Report* comprises two parts.

Part I addresses the state of the National Parks and National Historic Sites at the level of national significance. It provides background on the progress toward the establishment of new parks and sites and includes an extended statement highlighting the Systems Planning process by which new elements are selected. It is intended that future Reports will highlight other topics which reflect or describe the state of the resources.

Part II contains a profile statement of each National Park and National Historic Site in the systems. Each profile provides a consistent listing of "tombstone" or inventory data. Profiles will be updated and added to as indicators and criteria are developed and as new parks and sites are added to the systems. It is anticipated that it will be necessary to republish the profiles in the complete format of Part II of this Report every ten years.

© **Minister of Supply and Services Canada 1991.**

Published under the authority of the Minister of the Environment, Ottawa 1991

Cat. no. R64-184/1990E
ISBN: 0-662-18356-8

The photographs in this report are drawn from the collections of the National Parks, National Historic Sites, regional offices and headquarters of the Canadian Parks Service.

This report is printed on recycled papers using vegetable-oil based inks.

Cette publication est aussi disponible en français.

Canadian Cataloguing in Publication Data

Canadian Parks Service
State of the parks report, 1990

Issued also in French under title: Rapport sur l'état des parcs, 1990.
ISBN 0-662-18356-8
DSS cat. no. R64-184/1990E

1. National parks and reserves -- Canada -- Management.
2. Parks -- Canada -- Management.
3. Conservation of natural resources -- Canada.
I. Title.

SB484.C2.C32 1991 333.78'315'0971 C91-098551-0

PRINTED BY T & H PRINTERS, GLOUCESTER, ONT., CANADA

91-06020/

TABLE OF CONTENTS

MINISTER'S COMMENTS 3

INTRODUCTION 5

Historical Sketch 5

The Common Heritage and the Canadian Parks Service Mission 8

Benefits 10

International Recognition and Responsibilities 12

STATE OF THE NATIONAL PARKS AND NATIONAL HISTORIC SITES 15

The Context of the Report 16

Systems Planning 18

Completeness of the Systems 22

The State of the Resources 24

Introduction 24

National Parks 25

Threats 26

National Historic Sites and Canals: Condition of the Cultural Resources 32

Introduction 32

Durability/Deterioration 32

Built Heritage Resources 33

Archaeological Resources 36

Artifact Collections 40

Artifact Collections in National Parks 41

The State of Service to the Public 42

Awareness 42

En route 43

Reception 43

The Heritage Experience 43

Heritage Presentation 44

Support Services 46

Contemporary Facilities 46

Public Safety 47

Enforcement 49

Extension 51

Research, Planning and the State of the Parks 52

Planning and Research 52

Research Effort 54

Partnerships 56

Cooperating Association Program 56

Volunteer Program 57

Partnerships with Universities 58

Other Partnerships 60

PROGRESS TOWARDS NEW PARKS AND SITES 63

The System Plans 64

Progress in the Last Five Years 66

National Historic Sites 66

National Parks 68

Current Activity 72

National Historic Sites 72

Cooperative Initiatives 73

National Parks 73

National Marine Parks 77

CONCLUSION 79

APPENDICES 81

1. The State of Planning — National Parks 82

2. The State of Planning — National Historic Sites 84

3. Canadian Parks Service National Market Survey Results 88

This publication contributes to State of the Environment Reporting.

Minister's Comments

Canada's National Parks and National Historic Sites comprise a significant heritage treasure unique in the world, one in which all Canadians can and should take a great deal of pride. They are places where we can study natural ecosystems and interpret the way that the environment has influenced our social development as a nation. They also provide significant opportunities for us to enjoy outdoor activities. Equally important, they are an act of faith in the future of Canada: by preserving wilderness tracts and historic resources we are asserting our collective belief that there are special places whose importance transcends their immediate contribution to our gross national product. This is a responsibility not only to future generations of Canadians but also to all mankind as part of international heritage efforts.

In 1988, the Government amended the *National Parks Act* to require the Minister of the Environment to report to Parliament on the State of the Parks every two years. The objective of this first *State of the Parks Report* is twofold. First, it provides an assessment of how well our national heritage is protected and commemorated through the current system of parks and historic sites. This, in turn, will help guide our decisions concerning the direction future efforts will take. Second, it establishes a benchmark against which we can measure our progress toward the completion of the national parks system.

Canada's Green Plan enunciated our long-term goal of setting aside 12 per cent of Canada's total territory as protected space. The national parks system is the best-known vehicle Canada has for preserving and protecting land and, accordingly, the *Green Plan* has set out a number of specific measures aimed at meeting the 12 per cent target.

Specifically, the *Green Plan* actions will:

- establish five new National Parks by 1996;
- conclude agreements for 13 additional parks to complete the terrestrial system by the year 2000;
- establish three new National Marine Parks by 1996 and a further three by the year 2000;
- commemorate seven key historic themes by 1996 and a further eight by the year 2000.

The *Green Plan* also spells out specific actions to augment our ability to protect Canada's natural heritage.

These include:

- expanding forest fire protection;
- developing an enhanced resource management program involving applied studies for ecological integrity and regional integration;
- supporting staff training in natural resource protection; and
- promoting the concept of parks as "living" scientific laboratories and models of sustainable development management.

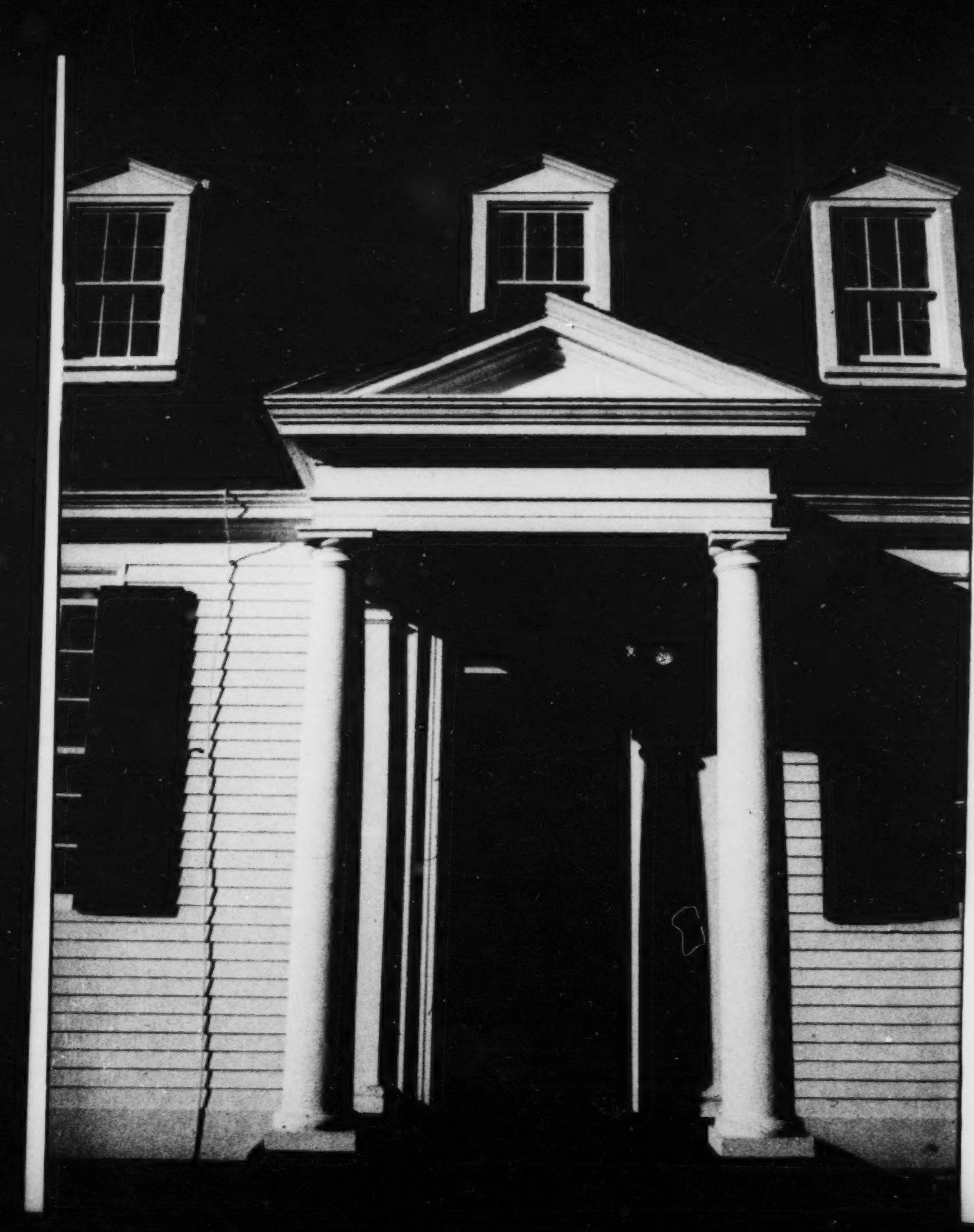
As with many aspects of *Canada's Green Plan*, partnership will be the key to future success in these endeavours. Our common heritage will only be preserved through the cooperative actions of all governments and all sectors of our society.

Canada's National Parks and National Historic Sites have long enjoyed an international reputation for excellence. With the actions outlined in the *Green Plan*, I expect that the next *State of the Parks Report* will show considerable progress toward maintaining and enhancing this reputation.

The Government is proud of the progress we have made, and I look forward to sharing the next report with you two years from now.

The Honourable Robert R. de Cotret,
Minister of the Environment

Banff National Park



Introduction

Historical Sketch

Land was reserved for Canada's first National Park at Banff in 1885. Ten square miles of Rocky Mountain landscape, centered on sulphur-laden hot springs, were considered by the Prime Minister to promise "not only large pecuniary advantage to the Dominion, but much prestige to the whole country." The opening of the area by the Canadian Pacific Railway offered an opportunity to imitate the fashionable European health spas and resorts of the day, an opportunity not lost on the CPR's shareholders. The recent establishment of Yellowstone National Park in the United States may have provided some inspiration, but the prospect of a fashionable wilderness mountain resort, accessible via the comfort of the railway, led Sir John A. Macdonald to remark of Banff that he had, "no doubt that it will become a great watering place".

Few themes in Canadian history have been as important as the 150 year rivalry between France and Britain in North America, and no site outside of Québec City or Louisbourg more effectively illustrates that theme than Fort Anne. Situated in what was the capital of Acadia and, until 1749, of colonial Nova Scotia, Fort Anne was established as a Dominion Park in 1917. It is the longest continuously administered National Historic Site in the system, and occupies an important place in the story of Canadian heritage preservation.

After the creation of Rocky Mountains Park at Banff, other neighboring areas were soon secured. The reserves which were to become Yoho, Glacier and Waterton Lakes National Parks were all established within a decade. By 1902, Rocky Mountains Park was extended to 11,396 square kilometers — much larger than its present size. In 1911, the *Dominion Forest Reserves and Parks Act* reconstituted the Reserves as Dominion Parks, established a necklace of parks along the mountain sections of the transcontinental railway, and gave responsibility for the parks to the Department of the Interior.

Meanwhile, a series of initiatives made Canada's Historic Sites an integral part of the Dominion Parks program, and gave responsibility for Canada's natural and cultural heritage places to a single agency. The formation of the Historic Sites and Monuments Board of Canada in 1919 created a mechanism to harness impartial specialized knowledge in the commemoration of the nation's past, and led to the inauguration of a program to erect federal historical markers—now numbering over a thousand—throughout the country.

Fort Anne National Historic Site

Until 1930, the federal government had control of the lands and natural resources of the western provinces, and Dominion Forest Parks and Reserves were largely designated from federal lands. The year 1930 also saw the enactment of the *National Parks Act*. By then the National Park system had grown to 14 parks, all in Western Canada except for three small parks in Ontario, whose total area was less than 50 square kilometers.

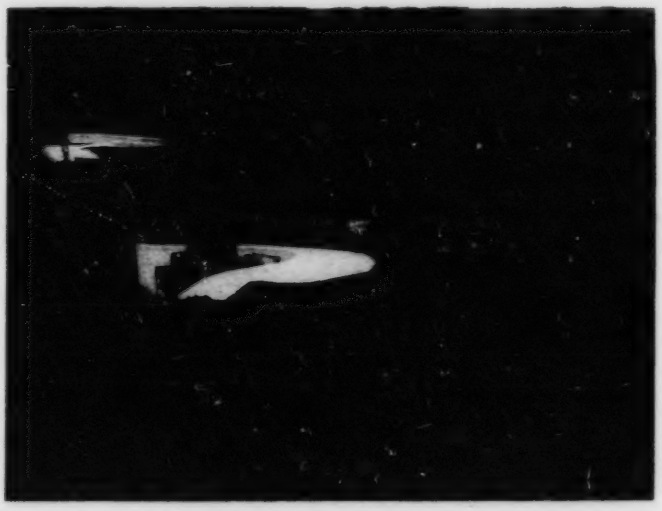
Just as many of the first National Parks were established on federal lands in western Canada, many of Canada's early Historic Sites consisted of federal installations of heritage importance in eastern and central Canada that no longer were required for operational purposes; often these were fortification sites and battlefields. In fact, the transfer of federal lands became the single most important source of early National Historic Sites, and the process remains important. Approximately half of the sites now administered by Environment Canada's Canadian Parks Service fall into this category, including two of the newest and most significant. The Gulf of Georgia

Fortress of Louisbourg National Historic Site

Cannery in British Columbia and Grosse Île in Quebec are transfers from the Departments of Fisheries and Oceans, and Agriculture, respectively.

Proposals to create National Parks in eastern Canada were made in the early 1920s, but it was not until the following decade that Cape Breton Highlands and Prince Edward Island National Parks were founded. Following World War II, Fundy National Park was added, and the establishment of Terra Nova in 1957 extended the National Parks System into Canada's newest province.

In 1951, the Report of the Royal Commission on National Development in the Arts, Letters and Sciences (the "Massey Commission") led directly to the passage of the *Historic Sites and Monuments Act* of 1952–53. This Act established a statutory basis for the Historic Sites and Monuments Board of Canada, and described the powers of the federal government with respect to the commemoration of historic places. Another Royal Commission, established in 1959 to study the coal industry, recommended that retraining programs for displaced miners be set up. One such program took on the reconstruction of the Fortress of Louisbourg, the largest project of its type in Canada.



Although the concept of systems planning had not yet been fully applied to Canada's National Parks, the idea of managing the parks according to an organized set of principles had begun to emerge by the 1960s. Concern over the diminishing supply of undeveloped shoreline and interest in having National Parks in all the provinces of Canada were among the factors that led to the consideration and eventual inclusion of Kouchibouguac, Pacific Rim, Forillon, La Mauricie, Pukaskwa and Gros Morne. The National Parks Systems Planning Framework was first published in 1971 amid the very active negotiations for these new National Parks.

The inclusion of the North in the vision of a National Parks system representing all areas of Canada gave birth to the concept of the National Park Reserve, whereby steps towards eventual National Park status are taken, subject to the future resolution of native land claims. The establishment of Nahanni, Kluane and Auyuittuq National Park Reserves in 1972 climaxed the most active decade of National Park building in Canadian history.

This pivotal decade also saw the development of policies which would set many future patterns. Canada agreed to pay a portion of the cost of acquiring some park lands, rather than require free transfer of title at provincial expense. Policies to permit the continuation of traditional hunting and trapping by aboriginal people and to negotiate park establishment and boundaries with the aid of public participation programs were all introduced during the same period.

In 1972, responsibility for Canada's non-commercial canals was transferred from the Department of Transport to the Canadian Parks Service by Order-in-Council. The intent of this transfer was to recognize the modern role of the canals in heritage protection and interpretation, as well as recreation, tourism and transportation. The waterways would be operated and managed in ways befitting their historic character. Thus the extensive systems of the Rideau, Trent-Severn, Ottawa River, Chambly and St. Peter's canals were added to the federal inventory of special places.

The National Historic Sites program entered a boom period during the 1960s and early 1970s. The outpouring of national sentiment at the time of Canada's centennial and the linking of historic sites to tourism development were both powerful stimuli. By the end of the 1980s, the system of national historic sites presented a rich and varied legacy of heritage conservation and interpretation. It includes national shrines such as Grand Pré and Brock's Monument, which memorialize respectively the Acadian homeland and the defence of Canada during the War of 1812, and full period restorations such as the fur trade center of Lower Fort Garry. There are traditional museums at a number of historic sites, while the Historic Canals, still operating as active navigation routes, drainage and power generating facilities, serve in themselves as eco-museums of living history.

New National Parks and Reserves continue to be established under the systems plan; new and imaginative arrangements evolve constantly. Northern Yukon National Park was the first to be founded as the direct result of a native land claim agreement. Bruce Peninsula was the result of an exchange of responsibilities with Ontario that included the creation of Fathom Five, Canada's first National Marine Park. Grasslands National Park is being innovative with the use of non-government trust funding to acquire some land areas, and in South Moresby/Gwaii Haanas, the agreement with British Columbia included substantial funding for economic development in the region adjoining the National Park Reserve. Also at South Moresby/Gwaii Haanas, an agreement is under negotiation with the Haida for the cooperative planning, operation and management of the park.

York Redoubt National Historic Site

Grasslands National Park

The system of marine parks is to be extended as a result of the Agreement between Canada and Quebec regarding the Saguenay Fjord. In this instance, the Marine Region (Atlantic No. 9) will be represented at the confluence of the Saguenay and St. Lawrence Rivers as part of an overall conservation program for the St. Lawrence valley.

Today's system of National Historic Sites reflects a diverse and expanding range of themes which encompasses the broad spectrum of human history. Sites such as L'Anse aux Meadows and Port au Choix in Newfoundland, which document a thousand year old Viking site and a 4,000 year old aboriginal site, fill in previously missing chapters of our history. Historic Sites such as the Fortress of Louisbourg have dramatically enhanced our knowledge of the everyday lives of our predecessors. Many of the important places associated with Canada's human history remain to be commemorated in a manner that will ensure their preservation and care.

Amendments to the *National Parks Act* in 1988 made clear the primacy of ecological integrity in considering the options for National Park development, established severe penalties for poaching activity, and authorized the legislated boundaries of wilderness areas, ski developments and some communities. These arrangements and other administrative measures leave Environment Canada well equipped to administer the present system and complete the plan for the representation of the themes of Canada's natural heritage.

The Common Heritage and the Canadian Parks Service Mission

Environment Canada, through the Canadian Parks Service fulfills national and international responsibilities in assigned areas of heritage recognition and conservation; and commemorates, protects and presents, both directly and indirectly, places which are significant examples of Canada's natural and cultural heritage, in ways that encourage public understanding, appreciation and enjoyment of that heritage in a sustainable manner.

The policy links the concepts of natural and cultural resource protection and anchors the Parks Service's mandate to the stewardship of places where the resources or the commemoration of themes can be observed, understood and appreciated. The concept of stewardship on behalf of the public interest is an important one. Traditionally the steward holds a high office with an ethical and professional commitment to maintain an estate and pass it on in an undamaged, or even improved condition. Likewise, implicit in the role of steward is the responsibility to nurture a similar ethic in others so that the ideals of conservation and enhancement become part of general social values. Environment Canada is responsible to the government and people of Canada for the management of the parks and sites and for the encouragement of an effective and responsive conservation constituency in Canada.

While the main role of Environment Canada's Parks Service is stewardship, it is not the sole custodian of the entire Canadian heritage. The limits of its mandate are wide, but they are limits nonetheless.

There are several programs for the protection and presentation of heritage places and resources with which Environment Canada has connections and responsibilities but does not directly operate or manage the facilities. These programs are listed below but are not explored in detail in this Report.

The Canadian Heritage Rivers System (CHRS) is a cooperative federal/provincial program established in 1984; it currently involves the federal government, eight provinces and both territories. This program gives national recognition to rivers especially rich in heritage values.

The National Historic Sites Cost-Sharing Program contributes to the preservation of architectural and historic sites and structures of outstanding national significance.

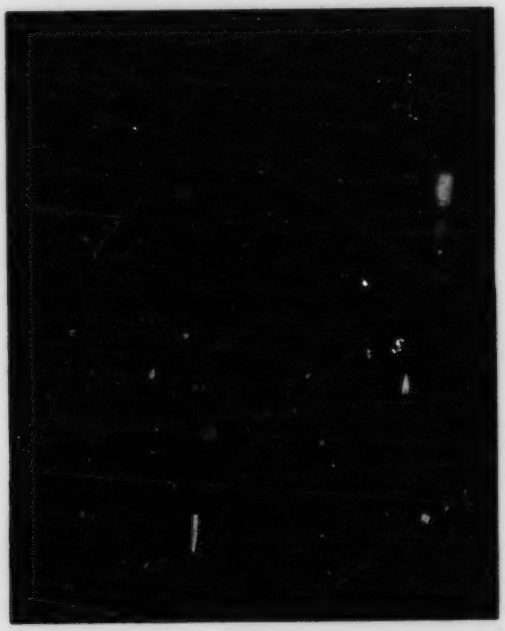
Underwater Life

The Federal Heritage Buildings Policy, a Treasury Board Policy administered by Environment Canada, encourages the preservation of federal buildings that represent an important part of the national heritage.

The Heritage Railway Stations program implements provisions of the *Heritage Railway Stations Protection Act* of 1988, which requires government authority for alterations to, or disposal of, designated heritage railway stations.

In addition, Environment Canada is responsible for the installation and maintenance of over 1000 Ministerial historical markers bearing the inscription of the Historic Sites and Monuments Board of Canada.

St. Lawrence Islands National Park



Lower Fort Garry National Historic Site

Benefits

National Parks, National Historic Sites and Historic Canals are the very essence of Canada's natural riches and cultural distinction. They are also part of a system of tourist attractions which provide opportunities for investment and employment.

In the context of sustainable development, the parks and sites are examples of environmental protection, managed to maintain natural and cultural diversity, capable of generating economic benefits for tourism and recreation, effective in guiding development of adjoining lands and available for public benefit, enjoyment and education. By protecting and presenting natural and cultural environments, wild habitats and historical places, Environment Canada is the custodian, on behalf of all Canadians, of

- outstanding examples of healthy landscapes,
- excellent examples of built heritage and cultural landscapes,
- reservoirs of natural species and gene pools,
- undisturbed habitat for wildlife,
- examples of historical relationships between humans and the land,
- wilderness sanctuaries,
- benchmarks for research into ecological processes, impacts of environmental change and past land uses, and
- models of environmental quality.

The benefits of these activities and places may be difficult to quantify in strict economic terms, but they are nonetheless part of the nation's "environmental capital." The emotive values of pride, distinction and sense of place are a part of the very essence of our national identity as well as being part of the department's trust. Frequently, the image used to signify the Canadian landscape is a view of a National Park panorama. Images of Ninstints, Louisbourg, the walls of Québec City, or Lower Fort Garry immediately recall the national history that has bound together half a continent.

These are the true values of the parks and sites. If the places and their resources, representative of Canada's diversity and rich history, do not stir the spirit and whet the mind's appetite, then the system has not fulfilled a part of its purpose.

Other benefits might not be intrinsic values of the parks or sites, but can be significant by-products nonetheless. The economic benefits of the parks system can be expressed in terms of revenue generation and employment opportunities. A recent study indicated the benefit of the parks and sites to Alberta where the mountain National Parks are a major tourist attraction. Expenditures made by people visiting the parks and sites, by the private sector in providing the amenities required by visitors and by Environment Canada in operating and maintaining its Alberta parks and sites amounted to $506 million in fiscal year 1987–88. Spending by visitors accounted for more than 80% of these expenditures, and represented almost 18% of provincial tourism receipts for that fiscal year. Private sector investments in the town of Banff and townsites of Jasper and Waterton Lakes amounted to $39.3 million for that same year, while Parks Service spending in those locations was $54.2 million. The study estimated that $467 million of Alberta's gross domestic product and 13,300 person-years of employment (including

980 by the Canadian Parks Service) accrued to the province from visitor, park and private sector expenditures during fiscal year 1987–88.

Another study concluded that moneys spent by visitors and by Environment Canada in operating and maintaining its parks and sites in the Yukon and Northwest Territories represent a small but stable component of the territorial economies. The study estimated that $10.4 million was spent in the Yukon and Northwest Territories by non-resident visitors while Environment Canada's Parks Service expenditures amounted to $15.4 million in 1987–88. Approximately $13.8 million in labour income and 500 person-years of employment resulted from this spending.

The parks and sites also attract international visitors. Conservative estimates indicate that in any given year nearly 20% of all visits to parks and sites are made by foreigners. Spending by these visitors, most of whom come from the United States, constitutes a net gain for the Canadian economy.

Beyond their commemorative and economic values, the parks and sites are an important resource for the academic world. They are living laboratories of natural and cultural history and are available to researchers whose projects add to the body of knowledge of natural and cultural heritage.

A statement of the national economic impact of the Canadian Parks Service was completed in 1985. This document is currently being updated to include expenditures made by the private sector in providing and recapitalizing visitor facilities, and by other federal and provincial agencies that provide tourist or public services in regions surrounding parks and sites. The update will also present visitor survey information gathered over the past five years. The statement will be completed during the current fiscal year, and will be analyzed in the next State of the Parks Report.

Auyuittuq National Park Reserve boasts some of the Arctic's best hiking trails, most challenging glaciers and mountains. These attractions lure hikers and climbers from around the world. And Pangnirtung is the Gateway to Auyuittuq.

The community provides an impressive assortment of services and reaps a lot of benefits. Visitors use the Inuit outfitters to take them to the park entrance at Overlord and introduce them to the magic of the Arctic. Outfitting for visitors and working as park wardens allows the Inuit the very significant benefit of making use of their traditional skills and abilities in the course of their everyday work.

Visitors add support to the printmakers, weavers and carvers of the town. The Angmarlik Centre acts both as the interpretation centre as well as the focus for community activity, with its elder's room and tourist office.

Direct financial benefit is also important. Salaries and wages for the Inuit park staff amount to almost half a million dollars annually and park visitors spend almost a quarter of a million dollars annually.

Auyuittuq has added some of the Arctic's splendor to the National Park System and Pangnirtung certainly adds its character and receives its benefits as the Gateway to Auyuittuq.

International Recognition and Responsibilities

The Canadian parks system occupies an important position in the international arena. Canada and its parks system are widely viewed as leaders in the international conservation community. Environment Canada represents Canada on the Unesco World Heritage Committee which implements the policies of the World Heritage Convention. The 1972 Convention, which Canada played a role in drafting, has been subscribed to by 114 state members and has designated 322 World Heritage Sites. Ten sites have been declared in Canada, and eight of them involve National Parks or National Historic Sites. Three sites (Point Pelee National Park and two sites in Wood Buffalo National Park) have been designated as RAMSAR Sites under the Convention on

International Recognition of Canadian Heritage

Figure 1

the Conservation of Wetlands of International Importance. Three National Parks have been designated as parts of Biosphere Reserves under Unesco's Man and Biosphere Program. Environment Canada also plays key roles in various international organizations, including the International Commission on Monuments and Sites (ICOMOS) and the World Conservation Union (IUCN).

In a unique legislative action in 1932, the Parliament of Canada and the United States Congress jointly proclaimed Waterton Lakes National Park and Glacier National Park in Montana to be the Waterton-Glacier International Peace Park. This has engendered close and cooperative ties among the administrators of the parks and each year there are joint celebrations during the period between the two national holidays of July 1st and July 4th. Other agreements with the United States government have resulted in the joint Canada—United States management of St. Croix and the Chilkoot Trail.

The Parks Service works within the spirit of the 1982 United Nations World Charter for Nature. This charter states that "Civilization is rooted in nature, which has shaped human culture and influenced all artistic and scientific achievements". A modest program of international cooperation enables several hundred visitors a year from foreign park agencies, and academic, professional and political institutions to examine the resources and the management of Canada's natural and cultural heritage. In response to requests from other governments, Environment Canada provides professional and technical assistance in the identification, establishment and management of parks and sites abroad. Recent projects have been carried out in Antigua, Cameroon, China, Madagascar and Pakistan.

An increasing number of conventions between Canada and other nations are stressing cooperative actions and programs on matters connected with both the natural environment and cultural resources. Mexico and the U.S.S.R. are examples where negotiations are underway.

The Ancient World could list its seven wonders; most of them have not survived. One of them, the Egyptian pyramids, has survived to find itself on another newer list—as a World Heritage Site. The passing ages have expanded the size of the list; in January 1990 there were 322 World Heritage Sites and the list continues to grow.

The member nations of UNESCO adopted the World Heritage Convention in 1972 to designate and offer world wide support for the protection and conservation of sites which represent the cultural and natural heritage of the planet. Of the ten sites designated in Canada, eight are associated with National Parks or National Historic Sites.

- **L'Anse aux Meadows, Newfoundland**
- **Nahanni National Park Reserve, Northwest Territories**
- **Dinosaur Provincial Park, Alberta**
- **Kluane National Park Reserve, Yukon Territory**
- **Anthony Island, British Columbia**
- **Head-Smashed-In Buffalo Jump, Alberta**
- **Wood Buffalo National Park, Alberta/Northwest Territories**
- **Canadian Rocky Mountain Parks (Including the Burgess Shale) Alberta/British Columbia**
- **Historic District of Québec City, Quebec**
- **Gros Morne National Park, Newfoundland**

State of the National Parks and National Historic Sites

The Context of the Report

The preparation of a State of the Parks Report gives rise to many questions. What is the condition of the parks and sites, how should it be described or measured, and by what standards should it be judged? Do we know enough to make a credible job of this assessment or must we devise new ways to see, new questions to ask, and new techniques to manage the resources in a way that matches their magnificence and maintains their wonder?

How well do the resources of the parks and sites reflect the objectives of Environment Canada's Parks Service Policy? That Policy states that a park's resources must be maintained in a condition of integrity, and visitors must be able to use the parks for their "benefit, education and enjoyment."

The protection of the parks and sites' resources is a responsibility to the national heritage, so that the resources might be sustained in their natural condition or in a condition which respects their historical character. Presenting those resources is a responsibility to the public, so that visitors might have an opportunity to enjoy and understand their significance and settings. These two responsibilities are indivisible and together reflect the wholeness of Environment Canada's stewardship.

The success of Environment Canada can only be measured against the fulfillment of both responsibilities. Both require active management and intervention. Natural areas will not evolve naturally if resource exploitation encroaches upon their borders, and visitors will neither visit nor understand places they have not heard about. Visitors in turn need facilities, whether these be small parking lots adjoining historic buildings or comfortable hotels in destination communities. The wider the market that the parks seek, the wider the variety of services that must be provided.

Real success depends on being able to satisfy both requirements; to maintain a resource and at the same time please its visitors. Anything less than an integrated system in which this balance is dynamically maintained to the benefit of both the resource and the visitor is a denial of the purpose of the parks and sites.

Three concepts are essential for the management of the national heritage: ecological integrity, commemorative integrity and sustainable development. All of these must be maintained. "Ecological integrity" is a concept based on ecosystems, in which the idea of completeness is implicit; this completeness is signified by the word integrity. However, a precise definition of the concept is elusive. There is no consensus about its measurement; the independence of one ecosystem is not absolute, but is linked with neighbouring ecosystems, all of which exist in a balance, adapting to a wide range of interventions. "Commemorative integrity" represents a similar concept of wholeness. It is often applied to cultural heritage sites where the key resources are neither impaired nor threatened, where the message of the place in history is effectively presented to the public, and where heritage values are respected. Sustainable development, the concept utilized by the Brundtland Commission, requires that all development should occur only in a way or to a degree that retains the integrity of resources for future generations. Sustainability was a basic objective of Canada's National Parks long before the Brundtland Commission, ever since the dedication clause of the National Parks Act required that the use of parks be conditional on leaving them "unimpaired for the enjoyment of future generations."

Each of these concepts affects park and site management, depending upon the nature of the resources in question. Natural resources are dynamic, always changing, always responding to new stimuli; flexible management of such shifting scenes is important. Cultural resources are more likely to be static, non-renewable works of human devising, whose deterioration and eventual disappearance is inevitable without active intervention. A wide range of development options is not available in National Parks and National Historic Sites where ecological or commemorative integrity must be protected. Individual parks and sites will not of themselves be models of sustainable development. However, when viewed as components of more extensive regions, Canada's National Parks and National Historic Sites can and do fit into the concept of sustainable development.

In addition to their value as healthy landscapes, the National Parks are a source of protection for gene pools and ecological processes. Such refuges are frequently required to assure the long term sustainability of a large range of species. There is a constant search for the best ways to manage park ecosystems. As a result, new and integrated resource management techniques are developed; these are often transferable to other contexts. Parks are also ideally suited to be used as benchmarks for natural conditions, and for research on resources in unexploited environments. The integration of the management practices and research programs for parks, sites and their adjoining regions is a basic part of the Biosphere Reserve program.

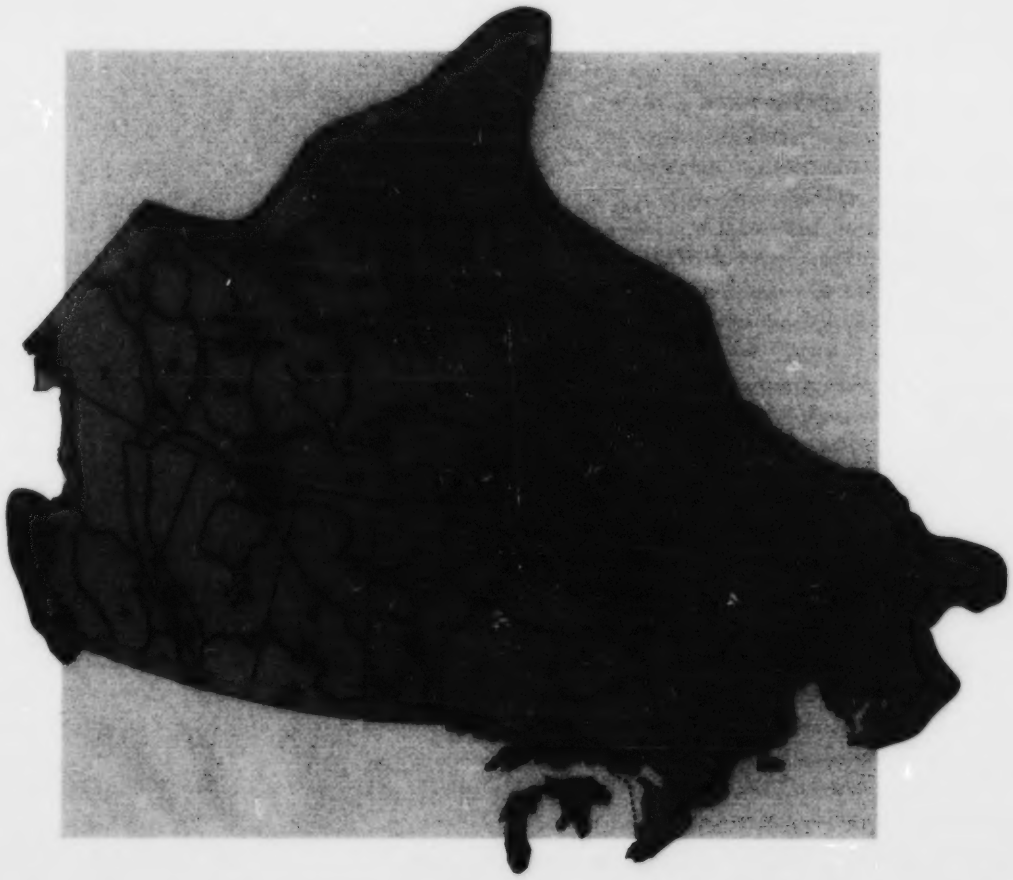
In a number of cases, historic preservation has exerted a strong influence and contributed to broadly based conservation ethics in major urban communities. There are several highly successful examples of the involvement of Environment Canada's Parks Service programs establishing the foundations for major architectural conservation projects in different parts of Canada.

Parks and sites provide outstanding locations that tell the stories of Canada's wealth of natural and cultural diversity. They are places where the constituency of people interested and involved in the cultural and natural environment can be nurtured and extended. With regard to sustainable development, the parks and sites are bases for environmentally sustainable tourism that can help diversify local and regional communities and economies.

Glacier National Park

Dawson City Buildings National Historic Site

National Park Natural Regions



WESTERN MOUNTAINS

1 Pacific Coast Mountains
2 Strait of Georgia Lowlands
3 Interior Dry Plateau
4 Columbia Mountains
5 Rocky Mountains
6 Northern Coast Mountains
7 Northern Interior Plateaux and Mountains
8 Mackenzie Mountains
9 Northern Yukon Region

INTERIOR PLAINS

10 Mackenzie Delta
11 Northern Boreal Plains
12 Southern Boreal Plains and Plateaux
13 Prairie Grasslands
14 Manitoba Lowlands

CANADIAN SHIELD

15 Tundra Hills
16 Central Tundra Region
17 Northwestern Boreal Uplands
18 Central Boreal Uplands
19 (a) West Great Lakes - St. Lawrence Precambrian Region
(b) Central Great Lakes - St. Lawrence Precambrian Region
(c) East Great Lakes - St. Lawrence Precambrian Region
20 Laurentian Boreal Highlands
21 East Coast Boreal Region
22 Boreal Lake Plateau
23 Whale River Region
24 Northern Labrador Mountains
25 Ungava Tundra Plateau
26 Northern Davis Region

HUDSON BAY LOWLANDS

27 Hudson-James Lowlands
28 Southampton Plain

ST. LAWRENCE LOWLANDS

29 (a) West St. Lawrence Lowland
(b) Central St. Lawrence Lowland
(c) East St. Lawrence Lowland

APPALACHIAN

30 Notre Dame - Megantic Mountains
31 Maritime Acadian Highlands
32 Maritime Plain
33 Atlantic Coast Uplands
34 Western Newfoundland Island Highlands
35 Eastern Newfoundland Island Atlantic Region

ARCTIC LOWLANDS

36 Western Arctic Lowlands
37 Eastern Arctic Lowlands

HIGH ARCTIC ISLANDS

38 Western High Arctic Region
39 Eastern High Arctic Glacier Region

Figure 2

Where are the present parks and sites, what do they represent and how fully do they portray the national heritage? Do they represent the places and resources important to the national heritage in a systematic way?

The original National Parks System Planning Framework was adopted in 1971. It classified the Canadian landscape by ecological criteria into 39 Terrestrial Natural Regions and 9 Marine Natural Regions. Each region is representative of a particular combination of natural characteristics – geology, land form, vegetation, wildlife and climate – which are perceptible to the general observer as being distinctive. For example, what the layperson may know as the Rocky Mountains, the geologist, botanist or forester may classify into many different zones; specialized classification to this extent is unnecessary for the National Park visitor and 6 of the 39 Natural Regions express the variety of this great mountain resource. Figure 2 shows the National Parks Natural Regions.

While the National Marine Parks Policy was being prepared, it became clear that the 9 Marine Natural Regions did not adequately identify the range of marine environments which should apply to a marine park system. An analysis of the oceanographic, physiographic and biological features of Canada's marine areas identified 29 Marine Natural Regions as shown on Figure 3. The National Marine Parks Policy was approved by the Minister of the Environment in consultation with other federal ministers in 1986.

The definition of the Natural Regions suggests finite systems of National Parks and National Marine Parks; if each region is adequately represented, all of Canada's terrestrial and marine environments are represented. Such a concept has the merit of simplicity, is readily understood, provides a rational basis for future planning and establishes priorities for the acquisition of new parks.

The system planning process advances beyond the definition of a natural region by the process of systematic analysis of an entire region to identify areas where its special or representative features exist in a way that would encourage the designation of that particular area as a park. In the process of this analysis, the social environment and the potential for development of park facilities are identified in conjunction with provincial, territorial, native and local government agencies.

Imagine an underwater landscape of incredible beauty, crystal clear visibility at depths of over 30 metres, with an abundance of aquatic life and interesting shipwrecks to investigate — and this in the clean, fresh waters of Lake Huron's Georgian Bay. This is Fathom Five, Canada's first National Marine Park.

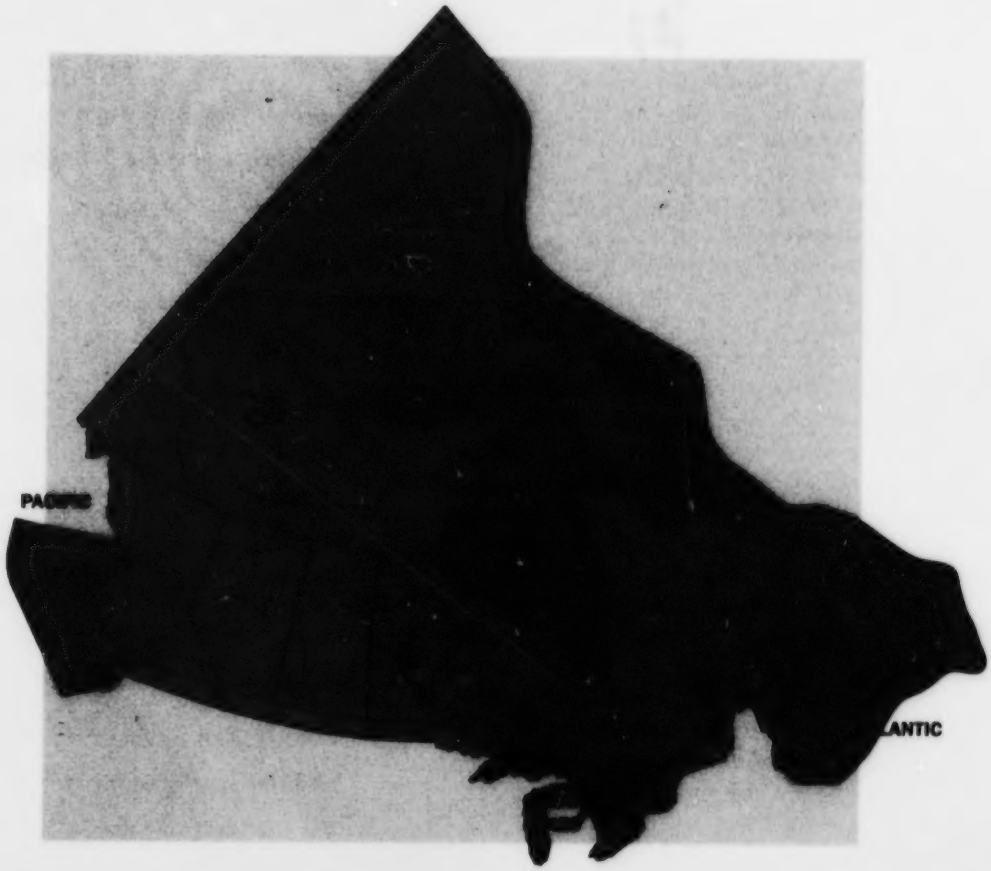
Situated next to Tobermory, Ontario, the park is renowned for its pristine waters and island setting, historic shipwrecks, dramatic Niagara Escarpment landscapes and outstanding scuba diving opportunities.

Fathom Five was established by an agreement between the federal government and the province in July, 1987. It had been an underwater provincial park, and its reputation as one of the best scuba diving locations in North America has continued intact. Over 7,000 divers registered with park staff in 1989, and 30,000 visitors toured the diver registration centre. But the popularity of the underwater environment has presented unique challenges in terms of public safety and education, and of the protection, management and interpretation of the park's resources.

Special zones have been established to help manage Fathom Five's diverse natural and cultural areas, and to provide a range of activities for visitors to enjoy. These can be as passive as viewing a shipwreck from a glass-bottomed boat, or as active as undertaking a challenging dive to the "Arabia" in over 35 metres of water! Conservation and the need to appreciate all resources without damaging what remains are prime messages at the park's Visitor Centre.

Thus far, Fathom Five has been a great success as Canada's first National Marine Park. It certainly won't be the last.

Marine Regions of Canada



ARCTIC OCEAN

- Beaufort Sea
- Viscount Melville Sound
- Northern Arctic
- Queen Maud Gulf
- Lancaster Sound
- Eastern Baffin Island Shelf
- Foxe Basin
- Davis and Hudson Straits
- Hudson Bay
- James Bay

PACIFIC OCEAN

- Hecate Strait
- West Queen Charlotte Islands
- Queen Charlotte Sound
- West Vancouver Island Shelf
- Strait of Georgia

GREAT LAKES

- Lake Superior
- Georgian Bay
- Lake Huron
- Lake Erie
- Lake Ontario

ATLANTIC OCEAN

- North Labrador Shelf
- South Labrador Shelf
- Grand Banks
- Laurentian Trough
- Scotian Shelf
- Bay of Fundy
- Magdalene Shallows
- North Gulf Shelf
- St. Lawrence River Estuary

Figure 3

The ideal national park proposal provides first an outstanding example of the natural environment plus economic and social benefits to its adjoining regions.

The objective of the National Historic Sites Systems Plan is to identify significant sites associated with themes of Canadian history for representation in the national system. The plan was adopted in 1981 and is based on an accepted classification of history into social, economic and political components. The nature of history as an ongoing phenomenon makes the notion of a "complete" system, as applied to the National Parks, inappropriate.

Figure 4 illustrates the hierarchical framework that the System Plan has adopted. Its division into categories, components, themes and sub-themes permits the framework to address the comprehensive sweep of history. For example, one category, Transportation and Communications, includes as components the heading transportation, the theme of water, and the subthemes oceans, lakes, rivers and canals. It is difficult to conceive of a mode of water travel in Canada's history which cannot be accommodated by this outline.

The Historic Sites and Monuments Board is important in the identification of National Historic Sites. The Board may recommend certain themes as being of national significance; research will then identify potential areas and time periods which properly represent those themes. Working with Board direction, Environment Canada identifies and evaluates potential sites which, if recommended by the Board and accepted by the Minister of the Environment, will become National Historic Sites. Alternatively, a site may be identified by the Board as having national historical significance based on its own merits and its contribution to Canadian history.

The Historic Canals stand apart from the concept of systems planning. The canals are working examples from the era when canal transport was of major importance. A whole range of historic themes, representative of the canals' functions as navigable waterways, drainage and flood control, power generation and military installations, is encompassed by the canal system. They also provide an opportunity for people to increase their understanding and enjoyment of our cultural and natural heritage while engaged in a variety of recreational activities. The location of the major canals, close to the population concentrations of central Canada, enhances their accessibility.

The golden age of canal building has come to an end, and no expansion of the canal system is anticipated.

Georgian Bay Islands National Park

Completeness of the Systems. In order to discuss the completeness of the National Parks, National Marine Parks and National Historic Sites systems, it is necessary to clarify some objectives for those systems. For the National Parks and National Marine Parks the objective is to establish at least one park for each natural region. It is acknowledged that such a system is representative of the natural environment although it may not contain examples of the full diversity of each region.

Of the 39 Natural Regions, 21 are represented in the present system; 8 regions contain more than one National Park. In order to complete the system with one park for each region, an additional 18 National Parks are needed. Representation of 21 of the 39 regions means that the system is 54% complete. The combined area of National Parks now totals 180,551.9 square kilometers, or 1.81% of Canada's total land area.

Gaps in the system are concentrated in the Northwest Territories, where 7 regions are not represented; Quebec, which has 4 regions without parks; British Columbia, which is missing 3; and Manitoba and Newfoundland, which lack 2 each.

Compared to the National Parks system, the National Marine Parks program is in its infancy. Currently, only one of the 29 Marine Regions is represented within a National Marine Park – Fathom Five, in Lake

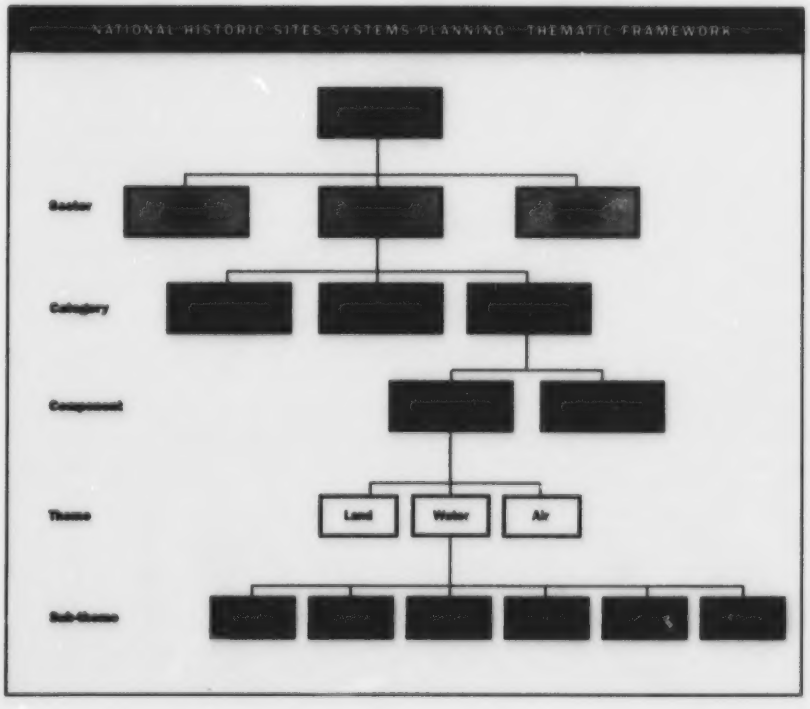


Figure 4

Artillery Park National Historic Site

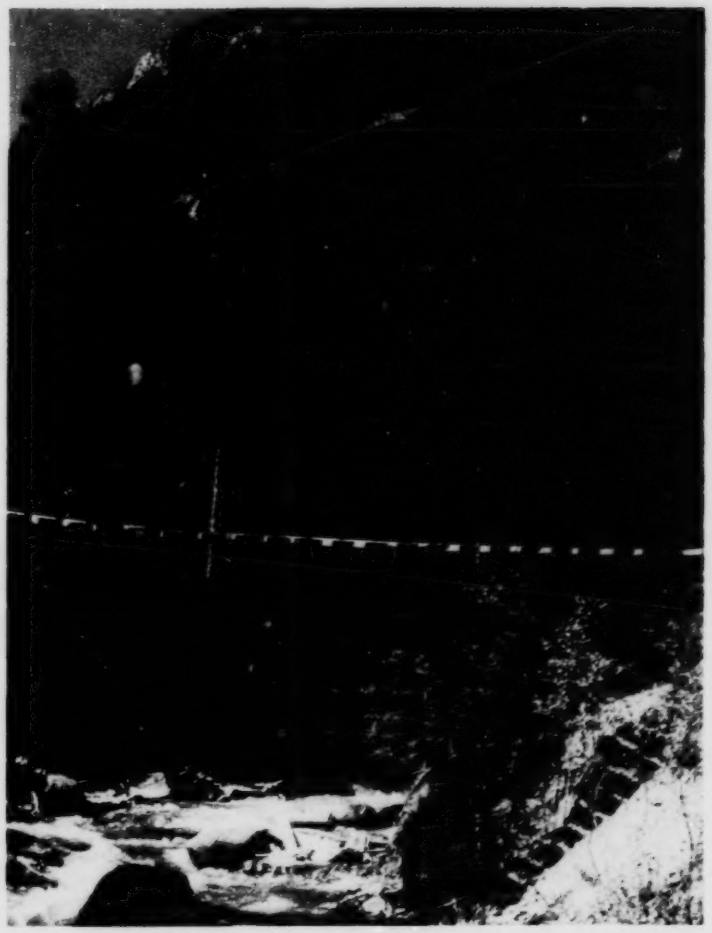
Huron's Georgian Bay, is Canada's first National Marine Park. The marine components of Pacific Rim National Park Reserve and the recently negotiated marine park in the area of the Saguenay and St. Lawrence Rivers represent two additional regions. Two more regions will be represented when South Moresby/Gwaii Haanas National Marine Park Reserve is established in 1993. With the representation of these five regions, 17% of the Marine Parks system will be complete, leaving 24 regions (83%) unrepresented.

For National Historic Sites, objectives cannot be nearly as specific. Work on the system must always be seen in the context of augmenting and enhancing the system rather than completing it. In order to focus acquisitions along systematic lines, a number of specific themes are identified for long and short term attention.

Of the 79 themes included in the National Historic Sites System Plan, 43 are represented in some form by presently designated sites. As has been noted, estimates of the adequacy, or degree of "completeness" of the historic sites system are of little value, since history is being made every day.

The Historic Canals are a complete representation of the 19th and 20th century navigable canals of eastern Canada still in operation but little used for commercial transportation.

The State of the Resources



Introduction. An analysis of the condition of Canada's National Parks and National Historic Sites must begin with an understanding of some basic concepts. First, the analysis of condition needs to be based on certain criteria. Where definitive or measurable criteria do not exist, management objectives and a consideration of how those objectives are being fulfilled may serve as an alternative standard of judgement. Without such objectives, which identify the purposes for which a park or site is to be managed, an assessment of the condition of a park or site's resources is not really possible.

Second, original works are priceless and natural landscapes have a complexity which is beyond economic analysis. Although both, theoretically, could be reestablished in the event of destruction, the unique nature of the original would be lost forever. Placing a price on a heritage value is not a useful exercise; it is the subjective and emotional values that matter, though they may not be quantifiable at all.

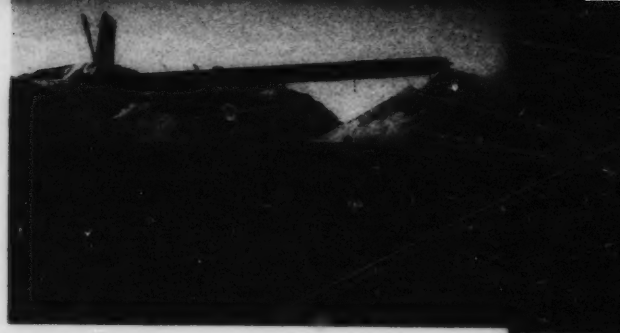
Finally, overall condition ratings for an entire system are not the best indicators for the condition of individual resources; when such judgements are made in this Report it is due to the absence of alternative, more specific data. This Report endeavors wherever possible to establish measurable or at least identifiable criteria by which the condition of the resources of individual parks and sites can be identified.

For all of the above reasons, the condition of the National Parks, National Historic Sites and Heritage Canals will each be considered separately. For all these systems, the condition of their resources will be analyzed by a consideration of the amount and nature of threats to which those resources are exposed.

The concept of threat is important for a variety of reasons. Exposure to threat is a major component of a resource's current condition, and knowledge of the nature of the threat allows resource managers to mitigate problems at an early stage. Both the nature of the threat and the available remedy must be understood. A threat may be progressive and comparatively slow, as in the case of degeneration from wear and tear, or exposure to adverse atmospheric conditions. Threats may also be climactic and sudden, such as breakage, destruction or vandalism. Remedies may include adequate and continuous maintenance, alarm and warning systems, controlled environments or security devices.

Both types of threat exist in relation to natural and cultural resources, and a wide range of remedies or opportunities to mitigate threats are available.

Kootenay National Park



Conversely, change and eventual deterioration are natural features of the life-cycle of most resources and artifacts; remedies may only be a matter of delaying inevitable losses.

The recognition of exposure to threat is a warning signal that all might not be well without some form of remedy. Likewise, management practices that have produced identifiable improvements in conditions can be evaluated as successful. As in the case with threat analysis, the use of system-wide averages is no real measure of conditions—two positives in one park do not necessarily balance one negative in another.

The profiles in Part II of this Report are a first attempt to present a comprehensive listing of the National Parks and National Historic Sites: their resources and facilities, their condition, and the threats to their integrity. The profiles gather and synthesize a wide selection of information whose sources are scattered among Parks Service headquarters, regional and field offices. The information is not yet fully refined. Reaction to this Report will help to enhance the usefulness of the information presented in future Reports.

National Parks. For the last two decades, a major strategic objective has been the completion of the system; other objectives have been secondary to this drive. Now, as the dream of a complete National Park system emerges as a distinct possibility within a decade, it is necessary to redirect the vision.

New resource management objectives must be determined for a stable and essentially complete system, a system which can serve as an environmental barometer for the whole nation. Strategic thinking is now being directed along these lines.

Bush flying in the Arctic is an enduring romance, with occasional disaster to add to the sense of danger. But over the last 30 years, the need for fuel and oil for airplanes and other machinery has left parts of the northern wilderness looking like one great garbage dump.

And a mess of more than 5000 used fuel drums is not what visitors to Ellesmere Island National Park Reserve really come to see.

During 1989, the Departments of Environment, National Defence, Energy Mines and Resources, and Transport mounted a combined operation to clean up this mess. Drums were collected and moved to the Eureka weather station where they were cleaned, and shipped to Montreal for reuse or scrap. Bradley Air Services and Kenn Borek Air contributed by ensuring that no aircraft left the park reserve without making up its load with drums and other garbage.

The *Sir John A. Macdonald* became more than an icebreaker when it picked up 1200 empty drums on its August resupply trip to the park headquarters. Now that the clean-up is under way, the park has established a general "carry-in, carry-out" program for all potential garbage. The trick will be to keep it tidy and make the eyesore a thing of the past.

Pukaskwa National Park

As has been noted, the 1988 amendments to the *National Parks Act* introduced the criterion of ecological integrity into the decision making process for park management. "The challenge posed by this criterion is not to establish the truth of how nature is and should be, (as conventional science would have it) rather it is to continue searching for how nature is and how it might be and of ensuring ways to sustain that search."* Environment Canada has only just begun to assess ecological integrity. A first step is to establish a working process to define and monitor indicators of the state of the ecological resources. It must then use the findings of this process to develop procedures for analysis, establishment of objectives and decision making. How well this challenge is met will be related in detail in subsequent State of the Parks Reports.

* R. Serafin, D. Balser, D.S. Slocombe & S. Woodley. "*Ecological Integrity and Management of Canada's National Parks.*" Report to CPS, U. of Waterloo 1989.

National guidelines can only function on the broadest scale. Each National Park is a unique entity requiring its own individual prescription of management objectives and techniques. It is only against this standard that success can be measured.

The extent to which the definition of the condition of a resource depends upon park objectives can best be understood by examples where disturbances have occurred. Naturally occurring fire, which could cause devastation from the point of view of the logging industry, leaves areas of National Parks in a continuum of renewal; this process has been a feature of forest ecosystems throughout history. The suppression of fire in protected forests has not only affected succession patterns in some cases, but also caused a build-up of fuel loading which can actually increase the intensity of fire when and if it does occur. More mature forests are also less diverse as habitat; as a result, the faunal communities that inhabit them can change, and often become less varied.

The suppression of wolves and other predators by early parks managers was guided by common perceptions of "bad animals" versus "good animals" such as elk and deer. A more enlightened and informed appreciation of resource protection and ecosystem functioning has seen the wolf become firmly re-established in the balance of our mountain National Parks. The large predators, including the wolf, grizzly bear and cougar, have large range requirements and occur in low numbers compared with the species they prey upon. In the long term, predator populations will survive only if habitat remains available to them both within and outside the mountain National Parks. They cannot be sustained within the National Parks alone.

Threats. The condition of park resources can perhaps best be understood by considering the threats to which they are exposed.

Two kinds of threats have been considered: internal and external. Internal threats are those occurring within park boundaries. They arise from internal conditions which can be identified, and, where appropriate, mitigated by park management

actions. External threats have their causes outside park boundaries, and can only be addressed by cooperative and coordinated activities with other agencies, both public and private.

Internal threats generally consist of those which affect the diversity of species and resources. Pressure on resources from visitor activity is a threat only in local areas where management does not take adequate mitigating steps.

External threats are most evident where adjoining land use pressures turn National Parks into biophysical islands. Local or regional threats include the effects of resource exploitation on land, water and air conditions. International threats, especially acid rain, are also considered.

Few parks report actual examples of species loss. Pukaskwa National Park identifies a declining population of woodland caribou, partly due to habitat change and partly to increased predation. Point Pelee National Park reports a reduction of genetic variety as the result of a loss of reptile and amphibian species, and of some small mammal species.

One of the most complex situations regarding species condition is that of the free roaming bison herd in Wood Buffalo National Park. Bovine tuberculosis and brucellosis are known to exist in a significant percentage of the approximately 4200 head of what are viewed as "hybrid bison", because of interbreeding between original wood bison and introduced plains bison. The presence of both diseases has been known for more than 60 years. The concern is that free-roaming bison may transmit these diseases to agricultural livestock, other wildlife and humans. Of special concern are the increasing incidence of cattle ranching in the region surrounding the park and consequent proximity of grazing cattle, and the possibility of contact with the disease-free wood bison herd of the Mackenzie Bison Sanctuary to the north of the park.

In February 1988, a five-member Environmental Assessment Review Panel was established to examine all reasonable courses of action to protect wild wood bison, domestic livestock and human health. The solution recommended in the Panel Report is to build a new herd of disease-free animals from Elk

In 1918, it didn't seem too much to ask that an annual duck hunt should be a feature of Point Pelee National Park. After all, it was on the migration flyway and there were so many ducks. Anyway, the Order-in-Council creating the park said it was permissible.

In 1977 the federal Cabinet decided to stop the hunt if an alternative area could be provided in cooperation with the province of Ontario and for a dozen years, the search for this area was on. Spurred on by the impatience of the protection lobby, the search was extensive but unsuccessful; Point Pelee remained the only National Park in Canada which hosted a recreational hunt of wildlife.

On June 6th, 1989 the Minister of the Environment decided that time had finally run out on the hunters, and that the concerns of the local and national conservation groups, which were supported by National Parks Policy, should be respected. So, you can hunt ducks throughout Southern Ontario, but Point Pelee now lives up to its billing as a National Park—a refuge for all of its wildlife.

Island National Park stock and salvaged animals from the park. Then the disease-exposed herd will be removed and replaced with the new disease-free herd.

Since the Canadian Parks Service has a responsibility to protect park resources, it was concerned about the potential irreparable loss of genetic diversity that would result from the extirpation of the hybrid animals. The report recommends a limited salvage of wood bison phenotypes from park animals and thus responds to this concern. At the time of writing, the report is being assessed and stakeholders consulted prior to reaching a conclusion on action to be taken.

A balance between visitor service facility development and the protection of land resources is essential. The prime example of where this balance is threatened is the montane environment. The loss of the montane, or valley bottom environment in the Banff, Jasper, Yoho, Kootenay complex has been well documented and remains a problem with no ready solution. The montane ecotype is scarce, and accounts for only 5% of total area in these parks; much of it is already occupied by transportation corridors, communities and visitor service facilities.

Past management practices cause concern in some places, and are threats to some park objectives. Fire suppression programs in Waterton Lakes National Park were effective for about 60 years, and produced large stands of mature lodgepole pine. By the late 1970s, these 70 to 100 year old stands provided excellent conditions for the mountain pine beetle, which by 1981 had caused 50% pine mortality. Fire-killed lodgepole pine forests regenerate themselves; those killed by the mountain pine beetle do not. A long term change in the make up of the forests of Waterton Lakes National Park can now be anticipated.

Aquatic resources appear to be the most affected of park resources. The introduction of sport fishing species and the effect of the popularity of certain sizes and species both affect natural balances. Commercial fishing in the waters off some coastal parks can also be a threat. Waterways suffer the downstream effects of polluted runoff from outside

Prince Albert National Park

Waterton Lakes National Park

park boundaries. Pollution levels from garbage left by visiting anglers are high enough in some areas to threaten aquatic resources.

One particular incident can provide lessons to guide the future choice of management objectives. In Prince Albert National Park, water levels were raised in some lakes to facilitate boat passage. This destroyed lake trout spawning areas by increasing water depth, and caused plant material decay on the newly flooded margins. The higher water levels also caused mass erosion on adjacent shorelines, resulting in the deposit of soil into the lakes and the release of heavy metals, including mercury. Higher water levels and siltation have degraded the remaining lake trout habitat. The public has been advised to limit its consumption of fish from these waters. Studies are underway to determine the best methods to restore water quality.

Overuse by park visitors is another common concern. There is no park in which this is a dominating concern, but facilities and locations which have the resources to become major visitor attractions are always in danger of resource degradation. This danger may be reduced by design interventions: trails may be hard surfaced, areas may be fenced, access may be controlled or channeled. Areas where resource condition is threatened are frequently local, and solutions will vary. Around Lake Louise the hardened trail surfaces may reduce the quality of the experience for some visitors, but have allowed a substantial increase in visitation without degrading resources below levels chosen in site design objectives. At Lake O'Hara, visitors were fewer in number but no less damaging to the fragility of the environment. The solution there was to limit access, relocate major features such as the campground away from sensitive meadows, and begin major rehabilitation programs for damaged resources.

In mountain National Parks, the discharge of treated domestic sewage has reduced the quality of natural watercourses, and, although community sewage systems have been upgraded and now meet effluent standards, the pristine nature of the Bow and Athabasca Rivers has been degraded.

Visitors to La Mauricie National Park will be struck by the unspoiled and tranquil natural surroundings. The park, however, faces an insidious and invisible ecological hazard, Acid Rain.

Acid rain is caused by gaseous residues (sulfur and nitrogen oxides) spewed into the atmosphere by industry, automobile traffic and heating appliances. These residues travel for hundreds, even thousand of kilometers before falling back to earth in rain and snow. The acidity of this precipitation can reach levels 10 to 40 times that of normal rainfall. Buffeted by an accumulation built up over the years, nature eventually is overwhelmed.

Quebec, especially the central St. Lawrence Valley, is heavily affected by airborne acid pollution. Its prevailing winds come from the most highly industrialized areas of North America and its soils are not able to neutralize this excess acidity. La Mauricie National Park is located in one of the regions most affected by acid rain, and the natural integrity and complex balances of its ecosystems are at considerable risk.

Initiatives to monitor changes in its delicate and vulnerable landscape are already underway in the park. Since 1983, Eclair Lake has been included in a network of 30 lakes monitored by the Inland Waters Directorate of Environment Canada, to document surface water acidification. In addition, Fisheries and Oceans Canada has launched a biological study of four of the park's lakes (Eclair, Francina, Hamel East and Theode) as part of a 20-year national program.

Monitoring will tell us what is going on, but it alone won't solve the problem. And acid rain is only one of the monumental environmental challenges that confront modern society. Will we be able to preserve and pass on an acceptable environment to future generations?

Wood Buffalo National Park

Almost all parks report increasing danger from the "island effect" threat, as the development of lands around the parks encroaches closer and closer upon actual park boundaries. This encroachment, however legitimate, reduces the total area within which park ecosystems are able to thrive. It transforms a park into an isolated haven for wildlife and natural floral species, and exposes a park to the peripheral effects of such things as pesticide, herbicide and fertilizer use. In the case of Riding Mountain National Park it has produced a sharp edge, no wider than a prairie road allowance, between native parkland and the extensive farming activity which occurs around much of the park boundary.

The easier accessibility which goes along with peripheral development activity also enhances opportunities for park access in once remote areas. The threat of poaching is much increased by this situation. Boundary surveillance and poaching control present major management problems in some parks.

As representative examples of the Canadian landscape, the resources of national parks reflect the general conditions that apply to the landscape as a whole. They are affected by cyclical climatic conditions, suffer the effects of acidic precipitation, and are affected by local or regional atmospheric and water pollution. In the event of major climatic change, the transformations that will be inevitable throughout the land must be expected to affect the parks equally. If, for any reason, it is a National Parks objective to protect specific ecosystems from this type of evolutionary progression, then specific protective measures will need to be devised and implemented.

A good example of successful management practice is the restoration or reintroduction of species which have suffered from the effects of environmental degradation. For example, the work carried out in support of the Whooping Crane and its nesting area in Wood Buffalo National Park is internationally significant. Less well known is the work in Prince Albert National Park to protect the White Pelican colony. In several of the Atlantic national parks, action has been taken to protect the nesting areas of the Piping Plover.

In some parks, deterioration has reached such a point that various species have been extirpated. One sign that ecosystem conditions are improving occurs when an extirpated species is successfully reintroduced into its traditional habitat. The recent reintro-

duction of Peregrine Falcons into several Quebec and Atlantic Region parks is showing encouraging results, as is the reintroduction of the American Marten in some eastern parks. In the aquatic environment, the most dramatic reintroduction has been that of the Atlantic salmon in the Alma and Point Wolfe Rivers of Fundy National Park.

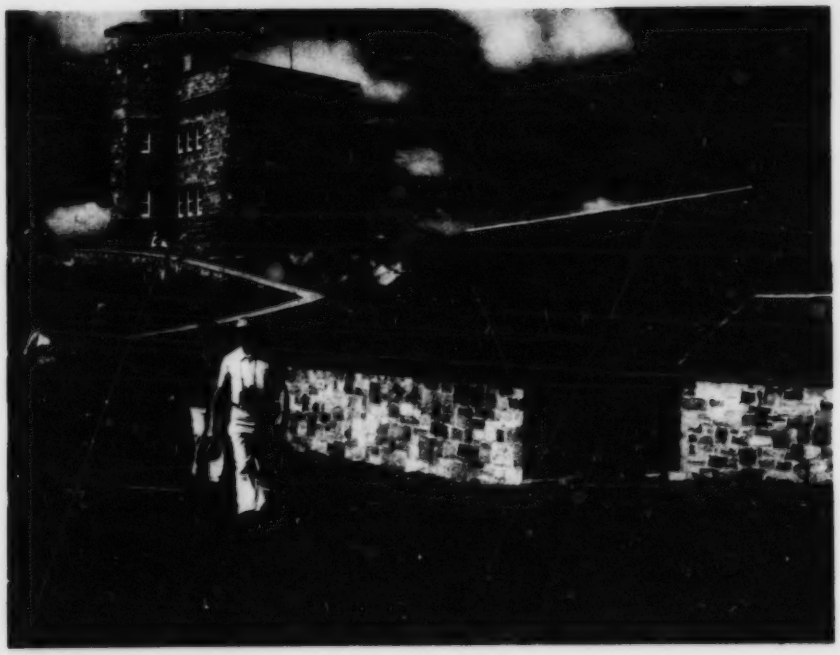
For the protection of park resources, the decision to use the Environmental Assessment Review Process to examine any and all development proposals within park boundaries is of key significance. It puts all proposals under the closest scrutiny, to ensure that the health of resources is considered.

Cooperative action and integrated planning between parks and sites and their neighbours are the keys to resolving potential conflicts with nearby land managers. Jointly developed conservation and management plans can maintain the integrity of resources and help develop a constitutuency for environmental stewardship. Visitors can be shown how to enjoy resources without threatening them. Improved presentation and communication programs can also help attain the objectives of park management by helping to build a constituency for conservation and support.

Unesco's Man and Biosphere Program provides practical examples of the value of National Parks both as barometers of environmental conditions and as integral parts of environmentally sound, sustainable regional development. Waterton Lakes National Park and Riding Mountain National Park have been bases for Biosphere Reserves for several years, while a newly designated Reserve on the Niagara Escarpment includes both Bruce Penninsula National Park and Fathom Five National Marine Park. The two more established Reserves have demonstrated by

Since time immemorial, fire has governed the structure and composition of plants and associated wildlife. Even during periods of glaciation, fire occurred as vegetation retreated southward in advance of the glaciers. Over the course of history various species have adapted to fire to the point of dependence. Fire releases the seeds of some species, prepares seed beds for others, and assures the growth of plants critical to the survival of certain species of animals. It is, in short, essential to the integrity of the ecosystem.

Fire is clearly a natural part of the cycle of most North American vegetation. Without it, species not adapted to fire multiply more easily; eventually, whole ecosystems can be altered. Indeed, in Canada's southern National Parks, where control of fires has reduced burn areas by more than 90%, ecosystems are no longer the same as when the parks were established. To rectify this situation and to maintain healthy, fire-dependent plant communities, a comprehensive fire management program is being undertaken by Environment Canada. A critical element of this program involves the deliberate use of prescribed fire. Planned and naturally occurring fire will both be used to help attain better ecosystem balances, in ways that minimize risks to adjoining areas and to capital developments inside the parks.



Signal Hill National Historic Site

the results of research activity, facility development and extension work that benefits of designation far outweigh the costs of participation in the Biosphere Reserve Program.

National Historic Sites and Canals

Condition of the Cultural Resources.

Introduction. Cultural resources can be subdivided into three categories: built heritage resources, archaeological resources and artifacts. Traditionally, reports on resource condition focused on specialized functions (architectural, archaeological, curatorial, artifact conservation) or individual sites. This Report is a first attempt at a system wide overview. No distinctions were made regarding the relative significance of the historical associations of various resources—if a given resource was associated with a National Historic Site, it was reported on. Considerations about condition have to acknowledge that few resources were made to last forever, or in the expectation that they might acquire national historic significance. Substantial and sensitive measures are often necessary to preserve such resources beyond their normal life expectancy. Finally, assessment of condition must be seen, at least in part, as a matter of perception, wherein the evocative powers of a resource and the most appropriate way of preserving it must be balanced. A stabilized ruin of an early 19th-century church may, as a ruin, be considered to be in good condition. It may also be seen as the dilapidated remains of a once operational church and be considered, as such, to be in poor condition. The rating of condition uses the objective of commemoration—ruin or restored church—as the reference point.

The concept of threats for cultural heritage resources is similar to that for natural resources; potentially there are continuing and progressive threats as well as sudden and devastating ones. Continuing and progressive threats include adverse environmental conditions, such as changing climatic conditions and shore erosion. These can be exacerbated when they were not considered during the original design or construction.

Sudden or devastating threats include theft, vandalism, some interventions required to meet modern standards and codes, and natural disasters such as fire and flood.

Durability/Deterioration. The durability and deterioration of any cultural resource are directly related to its physical composition and structure. Usually, a cultural resource consists of many kinds of materials, each with different characteristics. Deterioration of one member, such as a leaking roof or an unstable foundation, will inevitably cause a chain reaction which, if unchecked, will lead to the ultimate destruction of the entire resource. Degradation of the most humble element may start this chain reaction.

The deterioration process is dependent on the stability of the materials used and on the environmental conditions to which the materials have been exposed. The types of materials originally used vary enormously: stone, wood, textiles, bone, skin, metal, ceramics, glass, etc. They have one thing in common: in some way they have been modified by human intervention. This intervention can be either physical, such as the carving of stone, or chemical, such as the smelting of ore into metal.

All the natural deterioration processes of erosion, corrosion, or rot are simply the forces of nature returning modified material back to its original condition. Weathering will eventually wear away carving on stone; iron will rust and turn back to iron oxide.

Deterioration can never be truly reversed: even a timely intervention will inevitably alter the original fabric, if only slightly. However, regular maintenance can slow the process of deterioration down. In practical terms, unattended deterioration will lead to an irrevocable loss of historic fabric: the bronze of a statue will become too corroded, the wood of a chair will become too rotted, a roof structure will be too damaged by water infiltration, retaining walls may buckle too far out of alignment. In these cases historic material will be lost.

Some loss of historic material and elements is inevitable, particularly where a resource is exposed to weather. This is the case for exterior masonry joints or for wooden shingles, which by definition are exposed to the elements.

Some elements and materials may have to be sacrificed to remedy problems of accelerated normal deterioration that result from such things as frost penetration, poor drainage and permafrost. In such instances elements are sacrificed only as a last resort, when it is in the best interests of the preservation of the resource as a whole and when the heritage character of the resource would not be destroyed.

Constant care, vigilance and maintenance are essential if deterioration and decay are to be mitigated. Such a strategy not only saves original fabric, but often provides considerable financial savings through the increased life expectancy of hard-to-find and expensive materials and components. Regular maintenance is a vital part of cultural resource management for the Canadian Parks Service.

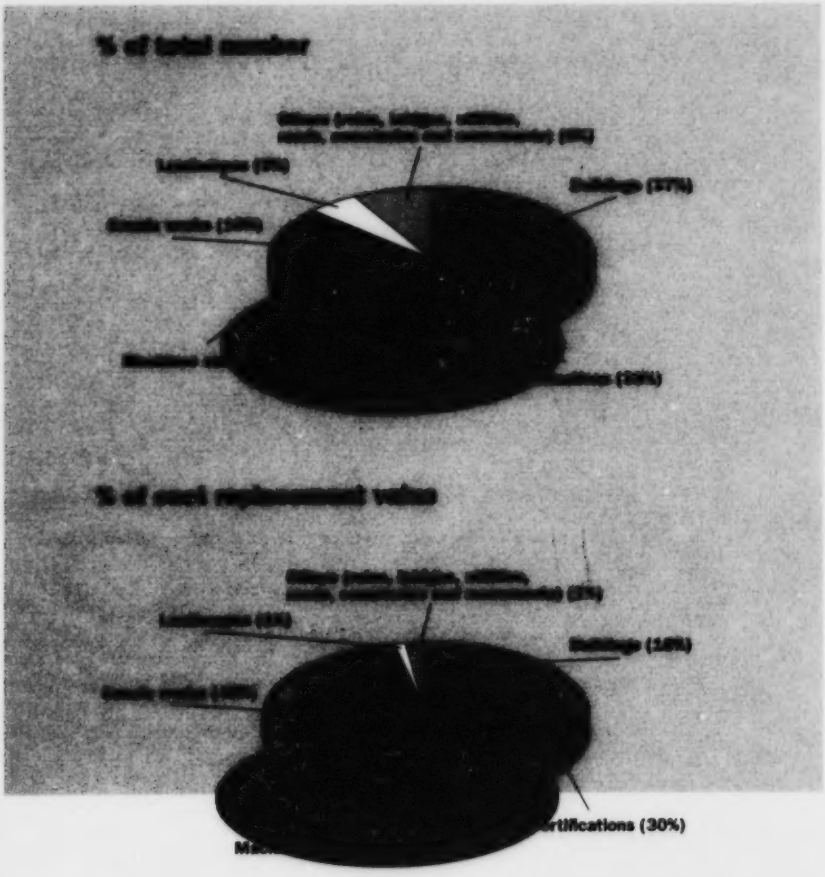
Built Heritage Resources. A built heritage resource is a structure or work, essentially intact or retaining enough of its form to be identifiable. Generally, it will be a period work although reconstructions are included. The Cape Spear Lighthouse, the walls of Québec City, Rideau Canal locks and the SS *Klondike* are all examples of built heritage.

Animation does not always mean cartoons. Animation is also the word for a technique that Environment Canada uses to make history come to life.

Since the mid-1970s the Fortress of Louisbourg has been dressing men and women—and indeed, many children—in handmade, authentic reproduction 18th-century costumes. Outfitted in period garb, the National Historic Site's well-trained animators and members of its corps of volunteers take visitors back into Canada's past.

In the course of a typical mid-summer day visitors see costumed animators perform dozens of period activities. There is everything from hearthside cooking, to peasant dances along the quay, to classical minuets in a well-appointed salon. Craftsmen ply their trades, soldiers carry out their drills, fishermen split their cod and mend their nets, and servants take a break from chores to gossip with 20th-century visitors. From lace making to artillery salutes, the animation program at the Fortress of Louisbourg offers a summer-long "pageant of the past."

Number and Cost Replacement Value of Built Heritage Resources



Information has been collected on buildings, fortifications, canal works, historic landscapes, cemeteries, marine vessels and machines within the built heritage category. There are more than 1000 built resources in National Historic Sites inventories and they have a total cost replacement value of approximately one and a half billion dollars. These figures include a number of modern resources, particularly canal works, without which the historic integrity of the total system could not be maintained. Figure 5 shows their composition by number of resources and cost replacement value.

For the evaluation of the condition of built heritage resources, the use of cost replacement value helps to quantify the degree of deterioration. Cost replacement value is the estimated cost of rebuilding a historic resource from scratch, and is only an indicator of the effort necessary to recreate the resource. Cost replacement value is not a measure of the heritage value of a resource; rather, it is analogous to the insurance value of a Van Gogh painting being set at the cost of making a modern copy.

The condition of the resources is expressed as a percentage of the cost replacement value, based on a professional evaluation. Its basis is the cost of restoring a resource to sound operational condition, and does not reflect any overall degree of historic value.

There are four major factors which affect the conditions of the buildings. Many historic sites were in an advanced state of deterioration when they were acquired; Grosse Île, the Gulf of Georgia Cannery and many of the military sites exemplify this problem. Several major reconstruction projects are now beginning to show signs of degradation. For example, wooden elements of the Fortress of Louisbourg are rotting because of high moisture levels, lack of heating and ventilation during the winter closed season and other water and related problems. Similar, but lesser problems have been noted at Fort Battleford and Fort Walsh.

Foundation problems caused by site conditions such as the low bearing capacity of the soils at Fort Lennox and permafrost in Dawson City have lead to structural failure which seriously affects the condition of buildings. Contemporary problems, such as the alteration of historical buildings to accommodate modern standards of occupancy or museology, all add to, and sometimes accelerate the rate of deterioration of buildings.

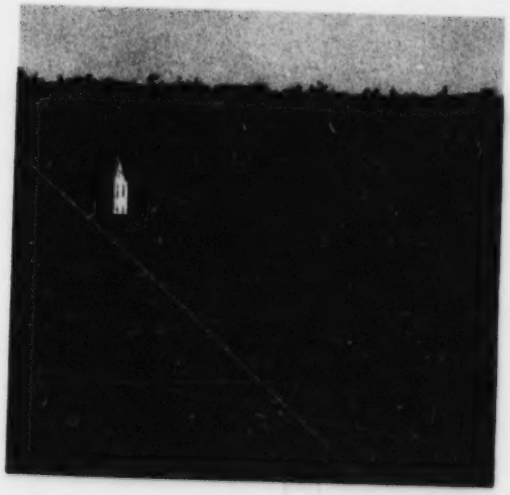
Figure 5

Grosse Île National Historic Site

Figure 6 shows the degree of threat to which the buildings and other resources are exposed.

Figure 7 shows the condition of fortifications. Of the 38% shown to be in poor condition, almost half can be rated at an extremely poor level. These percentages can be partially explained by a number of military sites which remain undeveloped. The resources specified to be in good condition are generally those which have been stabilized, and include more than two thirds of the Québec City walls and almost half of the Halifax Citadel.

Much of the threat to fortifications arises from the European design and construction standards of the original structures. The Canadian climate has not been kind to backfilling materials. These are susceptible to frost, and poor drainage and water infiltration have exacerbated threats. Other factors include the deferral of maintenance and the general state of disrepair of the original structures when they were transfered to the Canadian Parks Service.



Canada's first industrial ironworks, Les Forges du Saint-Maurice, was established, prospered and declined several kilometers north of Trois-Rivières. From 1729 to 1883, the Forge was the industrial heart of its region.

When Les Forges was developed as a National Historic Site, a daring architectural concept was used to highlight the vestiges of the blast furnace that was its nerve centre.

No attempt was made to reproduce the exterior structure of the building, which had evolved considerably over its 150 year life. Instead, metal structures were erected above the remnant foundations to suggest the size and layout of the original building. The new volumetric representation evokes the industrial character of the activites that once animated the Forge.

On the other hand, the Grande Maison, a prestigious building that was once the site's management headquarters, has had its exterior shell completely rebuilt. The Grande Maison now houses visitor reception services and administrative offices, is used to present a range of interpretive themes and, with much of the original, intact remains built into the new structure, provides a strong evocation of its historical role.

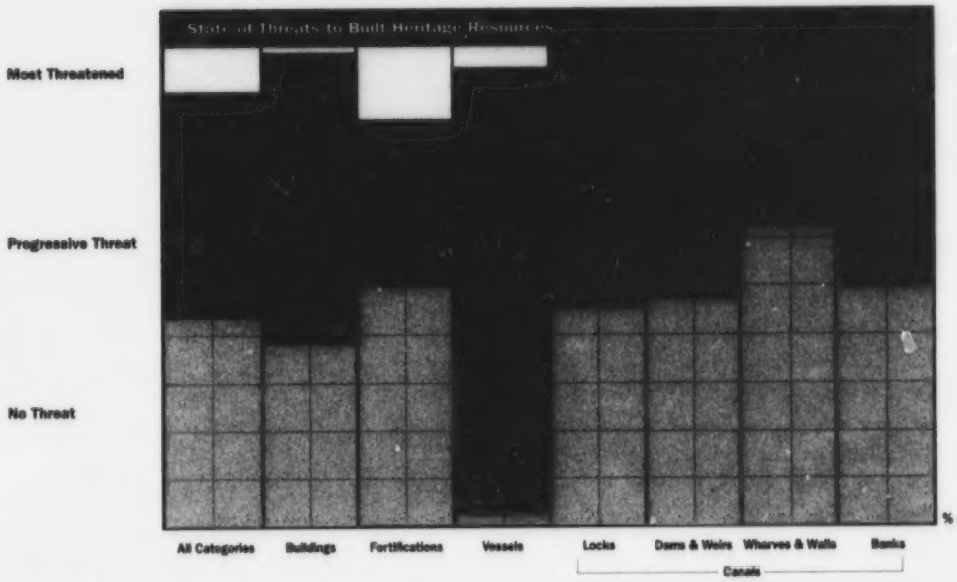


Figure 6

Canal works are a complex collection of engineering installations which provide not only navigable waterways but also drainage, flood control and power generation facilities. They include both contemporary and historic elements because of the degree of maintenance and reconstruction necessary to keep them in operation. Figure 7 shows the condition of the canal works, divided into four types: locks, dams and weirs, wharves, and walls and banks.

Threats to canal works, and marine works generally, are related to the structural history of the work concerned. Underdesigned structures have failed and received short-term repairs. Potentially they are still subject to deformation and movement. Natural decay of construction materials, weathering of masonry, erosion of concrete and the undermining of dams all take a significant toll on the condition of marine works. Increasing vehicle load levels require the upgrading of bridges, and are another major threat to the historic fabric.

Historic landscapes and cemeteries have not been systematically documented, and information on their condition is incomplete. Landscapes have frequently changed substantially over time. Human intervention, or the lack of intervention in the cycle of natural growth, change and erosion all combine to alter the nature of cultural landscapes.

Many machines and marine vessels were acquired because they were, in some way, threatened. As a consequence the condition of historic machines and vessels at the time of their acquisition has been quite poor. Exposure to unfavourable conditions is one of the prime reasons for their deterioration. Machines are now mostly in fair condition. Some still need to have foreign substances such as rancid foodstuffs or industrial chemicals removed from them; however, this clean-up process has been largely completed. Most machines have been stabilised. Alexander Graham Bell's hydrofoil HD4 is in good condition, while the SS *Klondike* and *St. Roch* are in fair condition. Two historic vessels, SS *Keno* and Dredge No. 4, as well as the modern reproduction of the *Grande Hermine*, are rated as being in poor condition. Threats to the vessels include changes in environmental conditions at storage locations, and natural disasters such as the flooding threat to Dredge No. 4 in the Klondike.

Archaeological Resources. There is no clear distinction between a built heritage resource and an archaeological resource; they exist in a continuum, and the inclusion of a given site in one category or the other will be somewhat arbitrary. An archaeological resource for the purpose of this Report is a surface vestige or the subsurface remains of human activity. Some sites such as l'Anse Aux Meadows, Port au Choix and Kitwanga will fit completely into this category. Others, including Louisbourg, Les Forges du St. Maurice or Lower Fort Garry, belong in a "hybrid" category in which built heritage and archaeological resources merge. Still others are substantially intact structures that contain few if any features that would be considered primarily archaeological in nature.

Twenty-four of the National Historic Sites may be classified according to the definitions above as being primarily archaeological; 31 have significant archaeological components (the "hybrids"); the other 57 have few or no archaeological components.

At some sites, there are archaeologically significant features that have no connection with the reason why the site is commemorated, such as a shell midden within the perimeter of Fort Rodd Hill, or a prehistoric burial beneath the rampart of Coteau du Lac.

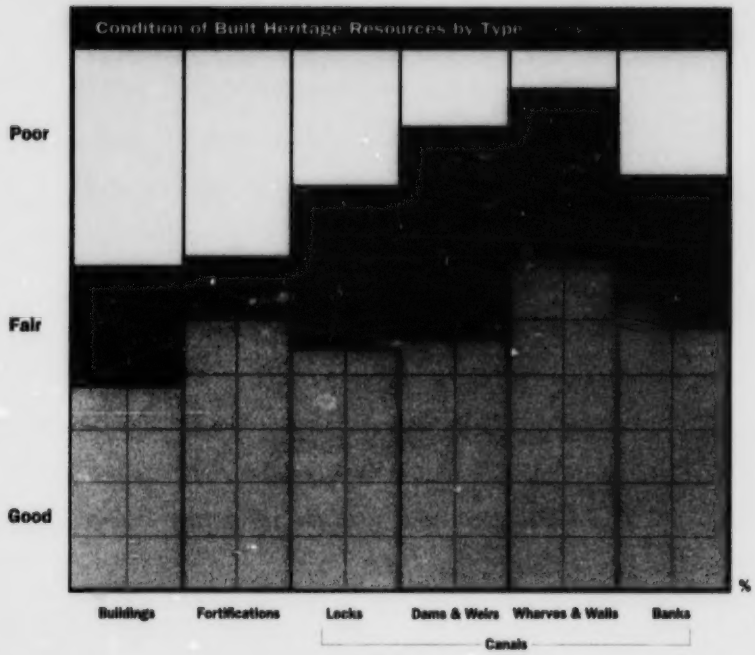
An assessment rating comparable to those for built heritage and artifact resources cannot be meaningfully applied to archaeological resources. The very processes of abandonment and decay that result in the eventual loss of visible structures, and which would result in an "extremely poor" rating in the built heritage category, are those that produce an archaeological site. The same is generally true for artifacts. Materials will react with their environment and begin to deteriorate through exposure to air, humidity, micro-organisms and temperature fluctuations. After an initial phase of rapid and often severe deterioration, resources approach an equilibrium, providing that their environment does not alter drastically. The degree of initial deterioration is a direct

The Lachine Canal is the direct ancestor of the St. Lawrence Seaway. From 1825 until the opening of the Seaway in 1959, the Canal allowed ships to bypass the Lachine Rapids and continue up the St. Lawrence River. Now, a picturesque refuge in an urban setting only minutes from downtown Montréal, the Lachine Canal is a ribbon of waterway, walks and wharves used by hundreds of thousand of walkers, cyclists, joggers and cross-country skiers annually.

Despite all its present attractions, the Lachine Canal's industrial past has come back to haunt it. Due to the Canal's high degree of contamination, recreational use of its waters has been prohibited since 1978.

Now, the Lachine Canal is due for a cleanup.

Because of the nature of the problem and the Canal's location in the heart of an intensively urbanized area, a number of important factors—technical, environmental, economic, social—must be taken into consideration; most important, what is to be done with the dredged sediments? Exhaustive studies are trying to determine the best way to attack the problem and to handle the contaminated sludge. As part of the cleanup process, the public is being kept informed and given opportunities to express its views. Hopefully, when the job is done, Montréalers can again be proud of their canal.



Good: No work required beyond routine maintenance
Fair: Minor conservation work required
Poor: Major conservation work required

Figure 7

Kitwanga Fort National Historic Site

result of the environment at the time of abandonment. In an extremely dry or extremely cold atmosphere, or at a site that is completely waterlogged, deterioration is much less severe than at a site exposed to temperature and humidity fluctuations.

Where a resource is entirely or primarily subsurface, its condition cannot be determined without excavation. Taking into account the normal and inexorable processes of deterioration and decay, most of the 55 sites that may be thought of as having significant archaeological resources were judged to be stable, unless the immediate environment in which they are situated is itself unstable or otherwise threatened.

Once sites have been excavated and any remains stabilized as visible features that the public may visit, they are assessed under the built heritage criteria, as in the cases of Coteau du Lac and Les Forges du St. Maurice.

The most common and severe threat to archaeological sites is shoreline erosion. Its high frequency is a direct consequence of location: people have always tended to settle close to water, whether ocean, river or lake; it is just these areas that are most susceptible to drastic change. Some complex sites close to water may exhibit a wide range of interrelated threats. Thus at Louisbourg, elements of the defence structures and isolated fishermen's dwellings located immediately adjacent to the shoreline are in danger during high tides coincident with storms; further in from the shore, masonry ruins are subject to the frequent water percolation followed by the freezing and thawing that is characteristic of a maritime climate; at the same time, high humidity hastens the rotting of timbers. Similarly, erosion of the riverbank at York Factory is threatening the loss of the site's subsurface resources.

A potential threat, primarily affecting aboriginal cultural resources in National Parks, is vandalism. Petroglyph sites are most vulnerable to defacement; sites in the North and locations along the Chilkoot Trail are vulnerable to visitors looking for materials to build fireplaces or for fuel; earth mounds are susceptible to damage from excessive use or failure to keep to prescribed walkways. Unprotected sites that become circuits for dirt bikes and off-road vehicles could be damaged to the point of destruction. Cases of real vandalism are relatively rare, but the threat requires high standards of security at some historic sites.

Artifact Collections. The artifact collections of the National Historic Sites fall into two categories: archaeological and curatorial. When archaeological artifacts

are excavated they are numbered, cleaned and studied. Objects of significance are identified early in the procedure; these are fully catalogued and given appropriate care and treatment. They may be placed on display and become part of curatorial collections. The remaining material (approx. 98%) is assessed for its information content and placed in storage for possible future study. The size of this archaeological collection is indicated by its volume: 1,000 cubic metres of material. The number of individual pieces in the collection is not meaningful; one object, such as a plate, could easily be present as one hundred fragments. The bulk of this collection has not been examined recently to determine its condition, but selective sampling indicates that, approximately 1–2% of the entire collection might require some form of conservation treatment.

Of the estimated 435,000 artifacts in the curatorial collection, 26% are on display at historic sites. The remainder are held in storage, or at sites not open to the public. To date 53% of this collection has been properly catalogued. For this reason an estimate of their condition is difficult.

An ounce of preservation is worth a pound of cure.

The Historic Resource Conservation Team—If it's broken, they'll fix it; if it's not broken, they'll conserve it. These Environment Canada experts might be called upon to repair, restore or conserve almost any of the hundreds of thousands of items that are cared for by Canada's National Historic Sites and National Parks. How about concrete Indian heads or 1919 vintage marine engines?

During the reconstruction of the Bow River Bridge in Banff National Park, people were upset to learn that the original two-metre tall Indian head motifs which graced the bridge could not be saved. The conservation specialists used a special silicone rubber compound to make moulds of the originals. The moulds were then incorporated into strong concrete forms which were given to the bridge contractor. Thus, the motifs were identically reproduced on the new bridge.

Another team took a different job which called for as much initiative and meticulous and painstaking craftsmanship when it conserved and restored two Liberty 12 engines, in preparation for their display at the Alexander Graham Bell National Historic Site. Bell had used one of these engines to power his hydrofoil, the HD-4, to an unofficial speed record on water in 1919. The engines were completely dismantled, and over 4,500 parts were cleaned and given a protective coating. Needless to say, everything fitted back together again.

Laurier House National Historic Site

Artifact Collections. The artifact collections of the National Historic Sites fall into two categories: archaeological and curatorial. When archaeological artifacts are excavated they are numbered, cleaned and studied. Objects of significance are identified early in the procedure; these are fully catalogued and given appropriate care and treatment. They may be placed on display and become part of curatorial collections. The remaining material (approx. 98%) is assessed for its information content and placed in storage for possible future study. The size of this archaeological collection is indicated by its volume: 1,000 cubic metres of material. The number of individual pieces in the collection is not meaningful; one object, such as a plate, could easily be present as one hundred fragments. The bulk of this collection has not been examined recently to determine its condition, but selective sampling indicates that, approximately 1–2% of the entire collection might require some form of conservation treatment.

Of the estimated 435,000 artifacts in the curatorial collection, 26% are on display at historic sites. The remainder are held in storage, or at sites not open to the public. To date 53% of this collection has been properly catalogued. For this reason an estimate of their condition is difficult.

The overall condition of an artifact can be given in terms of good, fair and poor. An artifact in good condition may have suffered some minor damage, but would be reasonably stable and should stay that way with proper maintenance and storage in a proper environment. An artifact in fair condition is in need of attention but not immediately; however, without attention in the near future it may well deteriorate to a poor condition. An artifact rated in poor condition is one which needs immediate attention to save historic material; without treatment or change in its environment it will be destroyed.

While the state of a single artifact can be judged on this basis with reasonable certainty, to judge the condition of an entire collection is difficult. Most collections have artifacts which range in condition from good to poor, and it serves no purpose simply to average the rating for every artifact in a collection. Instead, professional opinions are used to judge the overall condition of the site collections. For example, the following collections have been identified as being in less than good condition: Alexander Graham Bell (fair), Louisbourg (furniture condition—poor), Laurier House (furniture condition—poor), Banff Museum (poor to fair), Ninstints (poor).

Care of the artifacts in the two collections depends on a proper standard of display and storage. Guidelines to measure the care afforded to the collections are almost ready for publication.

The state of preservation of the archaeological and curatorial collections is not totally known. While more information is available on the curatorial collection, the majority of it is still uncatalogued. Estimates of the state of the archaeological collection are based on a knowledge of materials and on random sampling of the boxes in which it is stored. The majority of collections are regarded as being in a stable state of preservation, but a significant portion must be regarded as threatened.

An illustration of a collection under threat exists at the recently acquired Laurier House National Historic Site, where a large number of artifacts have been damaged by poor display conditions, in particular temperature and humidity fluctuations and strong light. The lack of a fire suppression system also poses a potential threat. The environmental improvements necessary to preserve artifacts may compromise the authenticity of the historic fabric of the building, while reducing light levels to stop the fading of textiles may impede the historic experience of the visitor. The preservation of the collection cannot be viewed in isolation from the needs of other historic resources, or from the presentation needs of the site.

Artifact Collections in National Parks. The artifact collections located within national parks include such diverse objects as a locomotive, Nootka artifacts, and objects used by early park wardens. They represent not only aspects of Canadian history but also the history of the Canadian Parks Service.

Mainly located in the western parks, this collection consists of at least 17,000 objects, 5% of which are on display in administrative offices, visitor reception centers, and interpretive exhibits. The remainder are held in storage.

In 1901, British authorities in Halifax donated two obsolete 7-inch rifled, muzzle loading guns to the town of Whitby, Ontario. For almost 90 years they graced the public landscape of the community until careful research determined that the two guns had formed part of the armament of the Halifax Citadel in the 19th century. Through the good offices of the Halifax Citadel Foundation, the town of Whitby generously agreed to return the guns to Halifax. In 1989 the two 7-inch guns complete with their carriages and platforms (weighing altogether over 20 tons) travelled halfway across Canada, and were remounted with great ceremony on the ramparts of the Halifax Citadel. The guns, unique in their survival, now help tell the story of the Citadel to visitors.

Youthful passion... rival families... doomed love...

Romeo and Juliet? West Side Story? Try Lower Fort Garry!

Students from Selkirk High School took 2000 hours of volunteer time to produce "The Foss Polly Trial" at the Lower Fort Garry National Historic Site, as part of their school curriculum.

The play, a story of young love and family rivalry, was performed on weekends of July and August 1988 on the second floor of the warehouse building at the Fort.

The State of Service to the Public

Canada's National Parks and National Historic Sites are held in trust for all Canadians, and Environment Canada owes a debt of service to them and to visitors from other lands. It must meet this responsibility of service as well as be the custodian of its resources and interpreter of the parks and sites.

In the past decade the department has developed both an understanding of the public, and various policies and processes which allow it to respond very directly to the needs and aspirations of visitors, without placing resources in peril. The development of the Cultural Resource Management Policy, the National Marketing Strategy and the Visitor Activity Management Process have been major strides forward in the evolution of responsive and responsible park and site management.

In order to provide some enhancement of traditional programs for visitors, the Visitor Activity Management Process introduced the concept of the "trip cycle" which considers a visitor's needs from the point of his or her first awareness of the parks and sites systems to the conclusion of a park or site visit. Using this sequential approach, programs to enhance visitor experience are developed and put in place.

Awareness. A potential visitor must know what is available, where, how to get there, and what to expect once there. Environment Canada has always used a variety of techniques from posters, brochures, maps and advertising spreads to exhibits at trade and travel shows. With marketing data, it has become possible to target special audiences, and to present special programs or packages of activities that appeal to traditional visitors and attract new ones.

In recent seasons, the Parks Service has joined with other parks or tourism agencies to generate interest in a wider range of regional activities. Similar opportunities in other areas are being explored more fully.

Jasper National Park

Enroute. Once under way, the potential park or site visitor needs enough information to keep anticipation levels high and to guide the way. Highway signage, special identity symbols, maps and brochures all assist; most require help and cooperation from other agencies. Facilities like the new Information Center in Yoho National Park, jointly developed and operated by the park with the province of Alberta, will become more common. Cooperative tourism strategies are being developed with other provinces and regions.

Reception. Arrival at a park or site provides a visitor with the opportunity to pick up the information necessary to make his or her visit complete and enjoyable. Personal welcomes at small sites, canal locks or campgrounds, information desks at visitor reception centers, radio transmissions over the car radio—all are used in appropriate situations to make visitors feel at home, welcome and informed about destinations. Hospitality training for both Environment Canada and private staff is a key ingredient of the operation of parks and sites.

The Heritage Experience. Good service is central to the interest and enjoyment of the visitor. Planners and managers are challenged to balance the conflicts and pressures of providing services while maintaining the integrity of a resource. There will always be pressure for a variety of uses which may not be compatible with heritage settings. This will continue as new activities gain popularity, and recreational technology produces new vehicles and equipment. In recent years, the advent of the snowmobile, the hang glider, the mountain bike and the jet boat have required some attention.

A major challenge is that of providing for park or site visitors with mobility, hearing or sight impairments to have access to as many resources and services as possible. By their very nature, parks, sites and canals can present many barriers and in some cases inherent dangers to the disabled. Access problems are not limited to traditional difficulties with stairs, doors and washroom facilities, but extend to the whole program of visitor services in protected natural and cultural resource areas. Environment Canada is carrying out a comprehensive program to

Hypothermia, yes. But hypermedia???

Hypermedia, according to computer specialists the closest thing yet to the brain's power of random association, allows a user to explore an endless number of pathways through a data base. Now, hypermedia has come to Canada's National Parks in the guise of "The Infinite Field Trip". Fifty-six hundred hours of effort from a park naturalist, a teacher and an assortment of students have gone into the preparation of this interactive video presentation.

This summer, visitors to Kootenay National Park will be able to step up to a computer terminal and enjoy a general tour of the park on-screen. The park will come to life through the use of text, sound and visuals. Visitors will know what's ahead of them and be able to choose the route they want to take as they explore the park.

Just to let you know that the trip is a great success. On Sunday, Mike and Joanna took me out for a picnic and we stopped off at Fort George—that's a National Historic Site at Niagara-on-the-Lake. It was great!

I got a real surprise. When one of the guides realized I couldn't hear, he went away for a minute and came back with one of his staff who could sign—and she was really good! She told me all about the Fort and the War of 1812, and she explained about all the people dressed up as soldiers and villagers and stuff. She also explained what was going on when some of the soldiers fired a cannon off. The way lots of the things are set up is good. They have special captions for the slide shows and the guide told me that some of the parks and sites even have special telephone devices for people like me. I really felt like part of the crowd there.

The guide told me that the parks people have a special deal with the Canadian Hearing Society to have all the historic sites and national parks set up for us over the next five years. She also said that they have the same kind of deal with the Paraplegic Association and the CNIB.

After Fort George, we had our picnic in the park and went up to see Niagara.

Hope everything is OK at home.

Love,

David

guarantee increased accessibility for disabled visitors. An action plan has been proposed and a detailed analysis of needs across the systems is underway. The implementation of improved access will be supported by cooperative agreements with various service agencies for the disabled; these agreements already exist with the Canadian National Institute for the Blind, the Canadian Paraplegic Association and the Canadian Hearing Society.

Heritage Presentation. Canadian heritage has a wide geographical, historical and physical diversity. It is this very diversity, together with its meaning and context, which is explained and interpreted to the visiting public, and to those who experience the parks and sites vicariously on the printed page or on the screen.

The art of presentation is to capture the essence of the themes of a park or site, and express them in a way that brings them to life for the visitor. Each park and site has its own interpretive themes, based on its resources or commemorative objectives. There are also national messages that transcend individual parks and sites. Acid rain, heritage conservation, the greenhouse effect, atmospheric pollution, the definition and purpose of World Heritage Sites and similar themes are addressed on the basis of national or global objectives. General messages concerning the principles of conservation can use local elements to reinforce their importance. Visitors are often temporarily in environments which may be alien to their experiences and instincts, and cautionary messages which stress respect for the resource and safe behavior may be important parts of the interpretive program.

Local environmental trauma often provides an opportunity to explain the complexity of resource management. Fire, flood, shore erosion, avalanche, pest infestation, all take their toll on the resources of a park or site. They also, however, often provide a valid basis for presentations on natural evolutionary processes, or on mitigating measures that may be used to address various problems.

Presentation takes three main forms: access to a site or resource, interactive interpretation, and the use of media, both on and off-site. All three technically involve interpretation, the process used to communicate an understanding and appreciation of a park or site. Presentation includes the activities, facilities, programs and services that bring the public into contact, directly or indirectly, with the parks and sites.

Presentation has evolved from the days when access to a park or site was the only service provided. Eventually wardens, caretakers or guides started to give informal talks and tours to visitors, labels and signs appeared, then signs became exhibits, and information became interpretation. Access to parks and sites remains the primary service on which everything else has been built. This is why the denial of public access, however valid on the grounds of protecting a resource, is considered one of the most serious issues of heritage stewardship.

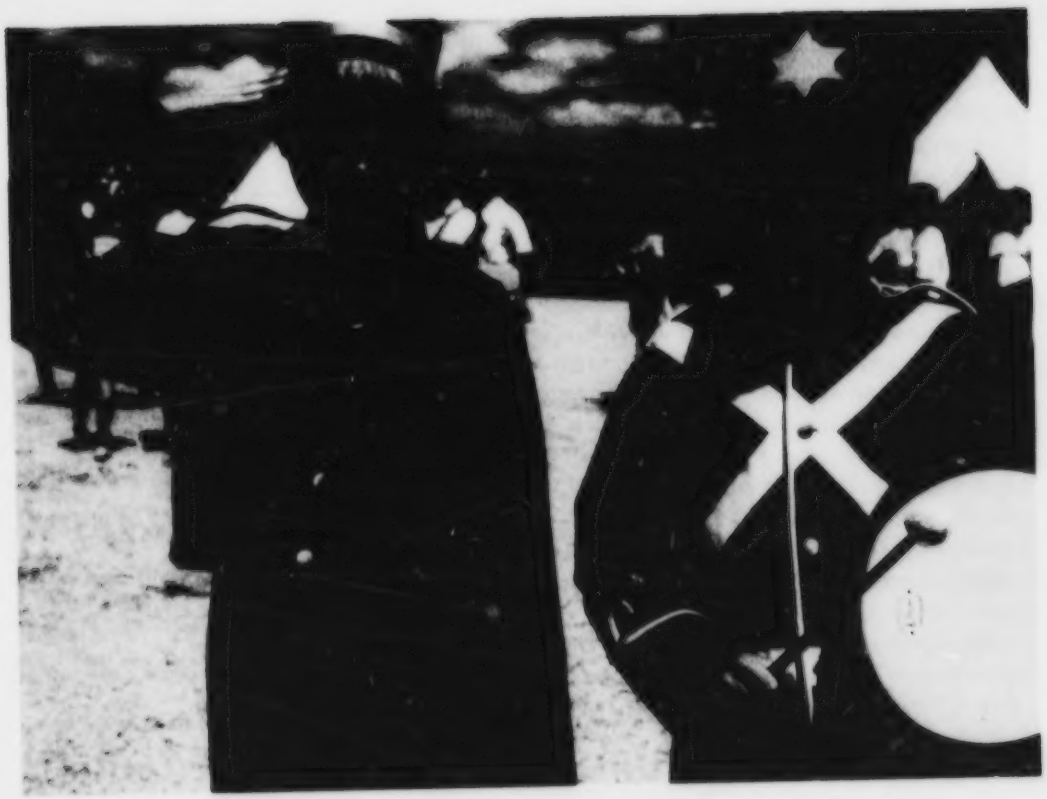
Interpreters and guides in uniform are found at places of special interest. At a number of National Historic Sites guides and animators in period costume demonstrate the lifestyle, chores and crafts of various periods. At some major sites, period animation programs are complete enough that visitors seem to be drawn back in time to an original experience of the site. In National Parks, evening theatre and campfire programs are very popular. Both parks and sites host special events, such as kite building and science programs for children, wolf howls, canoe outings and re-creations of historic events.

Environment Canda uses a wide variety of media to interpret its parks and sites. Audio-visual media of all types, exhibits which might range from simple fixed signage to three dimensional mixed media, artifacts, posters, brochures, booklets and postcards are all used to take advantage of their individual qualities.

Do you want to slither like an otter, climb like a spider or soar like a hawk? Fundy National Park's "Homes of Fundy" playground gives children a chance to learn about the animals in the park by imitating them as they slide, skitter up a rope web or fly along on a cable ride.

In the summer young visitors to the park can participate in their own interpretation program—Kidstuff. Every morning and afternoon children join a leader from the Fundy Guild, the park's cooperating association. They might explore a salt marsh, build a kite or make bannock on a wood stove. On Saturday night there is a family variety show in the main outdoor theatre. The show draws children and their parents together with skits and songs that teach them about caring for natural resources and having a happy, safe visit to Fundy National Park.

During the school year interpretive programs are held in the park and in local elementary and junior high schools. Since some of these programs began in the 1960s, park staff often encounter kids who have heard all about Fundy *from* their parents—parents who remember the wonders they themselves discovered on a guided beach walk or recall the impact an interpreter had on their imagination years ago.



Fort No. 1, Pointe-Lévis National Historic Site

Support Services. Visitors need a range of contemporary support services such as accommodation, access and sanitation. Many of these are provided by the department including campgrounds, roads, trails, water, sewer and garbage services. The private sector provides most of the hotels, restaurants, equipment rentals, outfitters and gas stations needed by visitors. To the visitor, this complete package of services is essential. Who provides them or where does not matter so much to the visitor; convenience and quality do matter.

The level of service depends on the balance between resource protection requirements and visitor experience. Accommodation, for example, may range from primitive camping areas in the backcountry, through fully serviced campgrounds, to luxury hotels. The challenge is to manage these and other facilities in ways that respect the integrity of the resources while providing a quality experience to the visitor.

Contemporary Facilities. To provide the range of experiences needed for public understanding, appreciation and enjoyment of the nation's heritage, Environment Canada develops and maintains a wide range of facilities. For management purposes, facilities are considered as groupings of fixed assets.

In 1990, the real property inventory comprised over 10,000 individual fixed assets with a total estimated cost replacement value of $4.3 billion; 86% of this value applies to modern facilities.

These modern assets, valued at $3.6 billion include some things which are in fact part of built heritage facilities, particularly canals, and have been considered as part of the cultural resources referred

to earlier in the Report. The remainder range from trails and visitor reception centers to specialized water control dams and maintenance compounds.

Operational support facilities and their component assets are included as part of this Report because they are essential to deliver desired levels of visitor service and facilities. The resources allocated to maintain this inventory, in terms of both annual maintenance and reconstruction of out-of-date or inadequate facilities, represent the largest annual expenditure for the Canadian Parks Service.

Public Safety. Environment Canada's involvement in the safety of the people visiting parks and sites is a very serious one.

Although parks and sites may be viewed as peaceful havens, the inherent danger of historic structures and stabilized ruins, fire, flood, avalanche, and wild animals is always present and visitors must exercise the necessary caution to reduce the hazards. For its part, the department identifies unusual dangers where they are a constant presence and publishes notices, information and advice on the avoidance of specific hazards such as bears, or uneven and dangerous ruins.

Two serious mountaineering accidents in Banff National Park during the 1950s served as the impetus for the establishment of a search and rescue program in the National Parks. During the 1960s and 1970s the development of advanced rescue techniques and the training of park officers ensured that Environment Canada could respond to an increasing number of recreational accidents, mainly in the mountain parks of the Western Region. Today, the Parks Service is widely recognized for its role in the National Search and Rescue Program. Environment Canada is the Canadian representative on the International Commission on Alpine Rescue (ICAR),

If your neighbours poisoned your water supply, chopped down your house, took away your meat and vegetables and generally made your life impossible, what would you do? The American Marten was confronted with just this problem in the Atlantic National Parks.

The martens did what every self respecting creature would—they left; only a few stayed behind in Cape Breton Highlands where mice, squirrels and small birds were still available on the menu. And that's the way it would have stayed except the neighborhood started to recover and the martens were led back to their ancestral homes, starting with two pairs released in Terra Nova National Park in 1982. Since then, over 100 of the mink-like mammals have been restored in Fundy and Kejimkujik, while Gros Morne will soon welcome some of its former residents.

With luck, and a bit of help from its friends, the American Marten is again able to call the parks home.

Canada's Mountain National Parks are true winter wonderlands: lands of peaks which shimmer against the blue curtain of a winter sky; lands which invite the visitor to experience true wildness. They are, as well, lands of sudden death.

The forces hidden in the metres of snow which blanket the winter mountains are a lethal trap for visitors who venture unprepared into this seemingly tranquil land. The name of the hazard is *Avalanche!*

To reduce the hazard, Environment Canada's avalanche control programs use an interesting array of techniques and weaponry in some unusual war games. The technique: use explosives to release the avalanche when and where it can do little damage. The weaponry: hand charges, 105 howitzers, recoiless rifles or gas operated cannons.

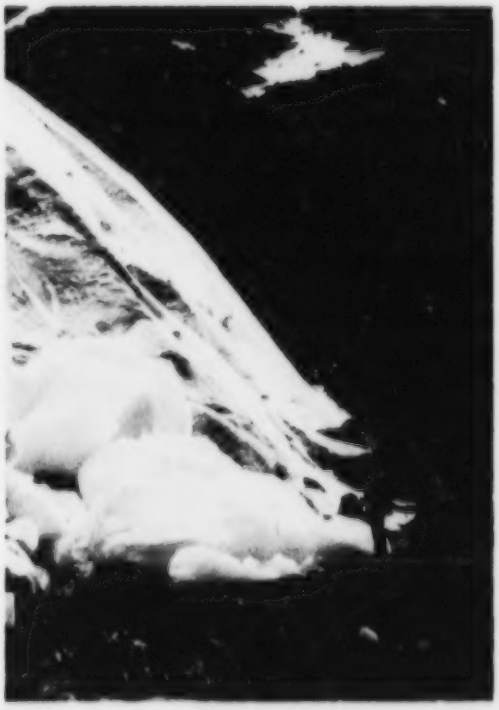
Victory is measured in terms of avalanches brought down before they can do damage to something or someone. Defeat may mean a loss of human life.

Predicting avalanche potential is part science, part art. The science is in the dozens of measurements and tests performed on the snowpack each day. The art is in the ability to read the "hidden signs" which exist beyond the ordered measurable world in which we live; to go with gut feelings about when and where an avalanche will release, in spite of what your measurements might predict. Experts in Environment Canada use a mixture of instruments and intuition to keep the mountains safe for winter travel.

Glacier National Park

and pioneered and developed the use of search dogs and helicopters for alpine rescue work in Canada. It provides training to organizations such as the Royal Canadian Mounted Police and is frequently called upon to provide both initial and back-up rescue services for many federal and provincial organizations.

Environment Canada emphasizes the importance of integrating accident prevention and prompt and effective response to accidents. Park users are expected to exhibit a degree of self reliance and responsibility for their own safety, depending on the degree of difficulty of their activities. They are expected to possess the skill and fitness required for their activities. Users are also expected to cope with



any adverse conditions that might be encountered, and to consider the extent of their own abilities in planning their activities. The Parks Service concentrates on providing basic rescue and safety services for recreational activities which are appropriate to a park's resources. Levels of service vary according to such factors as levels of use and the frequency of public safety incidents.

Existing public safety programs have been developed to respect the cultural and natural resources of the parks, sites and canals, and to balance the safe use of resources with the maintenance of the environment. The National Historic Sites deal with public safety through specific programs such as those set out for the handling of historic weapons and black powder. Overall direction for public safety at Historic Sites is under further development, with special concern being given to situations where modern safety standards may affect historical resources. Sprinkler systems, and access and egress requirements are among the most obvious examples.

Planning and programming for public safety are considered at each stage in a park's development. They first appear as a part of the Interim Management Guidelines for new parks, are continued through the preparation or updating of management plans, service plans and conservation plans, and become an integral part of the day-to-day operational regime of functioning parks sites.

Enforcement. Environment Canada must ensure protection of the heritage resources of parks and sites while providing for the safety of visitors, who have high expectations for both tranquility and security during their stay. A broad range of internal and external factors threaten park resources: pollution, infrastructure development, theft, destruction or degradation of resources.

A climber, dazed and disoriented, clings to a narrow rocky ledge. The morning's carefree mountain ramble has quickly become a struggle for survival. Suddenly, he is aware of the beating sound of helicopter rotors, and sees the rescue craft slowly climbing through the mountain haze air toward his rocky perch. He watches, unbelieving, as the warden hanging under the chopper is smoothly landed at his side. In a short while, he has received first aid, is in a stretcher and is ready to be bundled off to hospital—slung under the helicopter.

This scene is replayed dozens of times each year, particularly in our mountain National Parks. The helicopter has revolutionized the business of rescue. Not long ago it could have taken days to remove an injured climber from a rock face, or a hiker from the backcountry. Frequently victims succumbed to their wounds before they could be brought safely to a doctor or hospital. The history of mountain rescue is replete with tales of all night rescue marathons—wardens dragging stretchers for miles over impossible terrain with only headlamps to guide them, the victim's cries of pain punctuating each jostle and bump of the stretcher. Today, a helicopter is used to whisk people out of trouble in a matter of minutes or hours.

Born out of the determination of the Parks Service's rescue specialists to get victims to medical attention as quickly as possible, helicopter rescue techniques have replaced raw strength and stamina with the careful choreography of aerial precision, whose apparent simplicity belies its great dangers.

Environment Canada specialists are in the forefront of land search and rescue; they pioneered the technology and placed it at the service of the national park visitor. It is a proud service, and it deserves its reputation.

The Park Warden Service, comprising 250 full time and 175 seasonal staff, are responsible for resource management and public safety, as well as being the primary law enforcement cadre for almost 2% of Canada's land area. For National Historic Sites, municipal, provincial or federal police forces handle law enforcement.

The *National Parks Act* and its 30 regulations apply to matters as diverse as leases, toxic substances and wildlife protection. Environment Canada also enforces an array of federal, provincial and territorial laws in parks and reserves where the *National Parks Act* cannot be applied.

The Act establishes the role of wardens as peace officers, and provides substantial penalties for offenses related to wildlife protection. Poaching is a major problem in some parks where random access has become possible as a result of new development around park boundaries. Penalties of up to $150,000 in fines and six months' imprisonment can be imposed on poachers of certain endangered species, while lesser but still appropriate penalties await other poachers.

Environment Canada estimates that it is aware of only 10% of the poaching offenses that occur in National Parks. To combat this situation, and to meet the intentions of the amended *National Parks Act*, new initiatives have been introduced. These include the establishment of an enforcement unit in Ottawa and the stationing of an enforcement special-

St. Lawrence Islands National Park

ist in each Region. The Parks Service is a member of an Interdepartmental Committee on Law Enforcement Management, and pilot operations have been conducted to investigate the scale of poaching activities within National Parks; several cases have resulted in the conviction of poachers.

Extension. Presentation activity serves the park and site visitor, but not all Canadians visit National Parks or National Historic Sites. For many, the journey is too far, takes too long or costs too much, and yet these same people are a part of the "all Canadians" group for whom the places are held in trust. The question becomes how to provide some kind of vicarious access by which this large group of people, particularly in major urban centres, can come to appreciate their natural and cultural heritage.

For some decades, individual parks and sites have reached out to special groups in an effort to promote increased visitation. Today, efforts are being broadened to go beyond promotion to extension programming.

The current extension effort has three basic components: delivery of messages which prepare people for a visit; delivery of messages which might replace a park or site visit; and delivery of messages on general or even global themes that Environment Canada wants to circulate outside the parks and sites.

Extension messages can use a wide range of media. Books, pamphlets, maps, "edukits" and film or video presentations are all available to help build a wider constituency and to encourage public interest in environmental issues. Extension opportunities are almost limitless but must be carefully selected to bring National Parks and National Historic Sites effectively into the lives of many people who may appreciate their heritage but who lack the opportunity to visit the parks and sites personally.

National Parks are intended to provide protected havens for wildlife to roam freely in their natural habitat, fit into their natural niche and fear only their natural predators. This idyllic view only works if poachers are kept out of the picture. Individual poachers and organized poaching rings have become major law enforcement problems as Environment Canada strives to protect the National Parks as refuges for wildlife.

The Parks Service is developing a solid intelligence network, supported by the latest crime fighting gear and backed up with access to the Canadian Police Information Centre. A mobile task force is being equipped to travel and mount special law enforcement efforts. It will add to the ability of local park wardens to protect the wildlife resources of the parks. When poachers are caught, the punishment will fit the crime: fines up to $150,000 and/or 6 months in jail are among the highest poaching penalties in the world.

It may be a sad commentary that poaching inevitably increases as the development of areas around park boundaries opens up previously remote parts of the parks, but Environment Canada, now supported by strong legislation, is certainly out to get poachers!

The Park Warden Service, comprising 250 full time and 175 seasonal staff, are responsible for resource management and public safety, as well as being the primary law enforcement cadre for almost 2% of Canada's land area. For National Historic Sites, municipal, provincial or federal police forces handle law enforcement.

The *National Parks Act* and its 30 regulations apply to matters as diverse as leases, toxic substances and wildlife protection. Environment Canada also enforces an array of federal, provincial and territorial laws in parks and reserves where the *National Parks Act* cannot be applied.

The Act establishes the role of wardens as peace officers, and provides substantial penalties for offenses related to wildlife protection. Poaching is a major problem in some parks where random access has become possible as a result of new development around park boundaries. Penalties of up to $150,000 in fines and six months' imprisonment can be imposed on poachers of certain endangered species, while lesser but still appropriate penalties await other poachers.

Environment Canada estimates that it is aware of only 10% of the poaching offenses that occur in National Parks. To combat this situation, and to meet the intentions of the amended *National Parks Act*, new initiatives have been introduced. These include the establishment of an enforcement unit in Ottawa and the stationing of an enforcement special-

St. Lawrence Islands National Park

ist in each Region. The Parks Service is a member of an Interdepartmental Committee on Law Enforcement Management, and pilot operations have been conducted to investigate the scale of poaching activities within National Parks; several cases have resulted in the conviction of poachers.

Extension. Presentation activity serves the park and site visitor, but not all Canadians visit National Parks or National Historic Sites. For many, the journey is too far, takes too long or costs too much, and yet these same people are a part of the "all Canadians" group for whom the places are held in trust. The question becomes how to provide some kind of vicarious access by which this large group of people, particularly in major urban centres, can come to appreciate their natural and cultural heritage.

For some decades, individual parks and sites have reached out to special groups in an effort to promote increased visitation. Today, efforts are being broadened to go beyond promotion to extension programming.

The current extension effort has three basic components: delivery of messages which prepare people for a visit; delivery of messages which might replace a park or site visit; and delivery of messages on general or even global themes that Environment Canada wants to circulate outside the parks and sites.

Extension messages can use a wide range of media. Books, pamphlets, maps, "edukits" and film or video presentations are all available to help build a wider constituency and to encourage public interest in environmental issues. Extension opportunities are almost limitless but must be carefully selected to bring National Parks and National Historic Sites effectively into the lives of many people who may appreciate their heritage but who lack the opportunity to visit the parks and sites personally.

National Parks are intended to provide protected havens for wildlife to roam freely in their natural habitat, fit into their natural niche and fear only their natural predators. This idyllic view only works if poachers are kept out of the picture. Individual poachers and organized poaching rings have become major law enforcement problems as Environment Canada strives to protect the National Parks as refuges for wildlife.

The Parks Service is developing a solid intelligence network, supported by the latest crime fighting gear and backed up with access to the Canadian Police Information Centre. A mobile task force is being equipped to travel and mount special law enforcement efforts. It will add to the ability of local park wardens to protect the wildlife resources of the parks. When poachers are caught, the punishment will fit the crime: fines up to $150,000 and/or 6 months in jail are among the highest poaching penalties in the world.

It may be a sad commentary that poaching inevitably increases as the development of areas around park boundaries opens up previously remote parts of the parks, but Environment Canada, now supported by strong legislation, is certainly out to get poachers!

Research, Planning and the State of the Parks

Planning and Research. Environment Canada supports major applied research activities which are required by operational needs for the planning, management, presentation, and marketing of parks and sites. This research is often a matter of the examination of resources on-site, primary source research, and an analysis of research conducted by others. The emphasis on the significance of park and site resources often results in a substantial amount of inventory data, but fewer quality and condition of resources analyses.

Research associated with park and site establishment usually consists of the assessment of the resources of a location to determine their associations with the themes established by the Systems Plans and their degree of national significance. In order to successfully negotiate the establishment of National Parks and some National Historic Sites, it is often necessary to provide projections of use and the socio-economic advantages of the proposal. This requires research capabilities concerning international, national and regional elements of recreational use and demand, and tourism. In the case of National Parks, much of the study work is carried out by joint teams from the Parks Service and provincial or territorial officers. For National Historic Sites, research by the department is used by the Historic Sites and Monuments Board of Canada as a basis for its recommendations.

Once a park or site is brought into the system, research becomes a continuing feature associated with the operational responsibility for the resources. Initially, an inventory of the resources, including an assessment of their need for management has the highest priority.

Fort Wellington National Historic Site

Fort Témiscamingue National Historic Site

When the inventory is adequate enough to suggest operational needs, interim management guidelines prescribe management practices for a park or site until there are adequate additional data to support a management planning program. Park and site management planning requires further research to gain better knowledge of resources, and in particular to permit the presentation of resources to the public in imaginative and understandable ways. Both National Parks and National Historic Sites require periodic updating of research data in order to direct management practices to support ecological and commemorative integrity. Some of the biophysical inventory data used for early park plans are now 20 years old, and built heritage resources have to be regularly assessed to determine if they need repairs. The need for updating the data illustrates the cyclical nature of the continuous research, planning and review process that is so necessary for sound park or site management.

How can a government agency be sure that it is doing the right thing? For more than 20 years, Environment Canada has believed that it should ask the public to participate in most planning programs and to tell us what we could and should be doing.

When the Ontario Region of the Parks Service set out to prepare a policy for the Rideau Canal, it designed a public participation program which included open houses in Ottawa, Smiths Falls, Portland and Kingston. More than 1400 people attended and over 250 letters and comments were received. The public made a number of innovative and interesting suggestions about the plan and they told the planners a great deal about priorities and preferences. Many of the public's ideas were included in the plan and the Region was convinced that it was doing the right thing.

But the icing had not yet been put on the cake. The Regional Office learned that one of its professional peers, the Ontario Professional Planners Institute, had judged the public consultation program to be worthy of an Award for Excellence. The award was accepted and the Region is now really sure that it did the right thing the right way.

Northern Yukon National Park

Management plans are drafted with full public participation, and the plan must be tabled in Parliament. The management plan guides the long range protection, management and development of a park or site. After the approval of a management plan, a variety of plans for operational functions are prepared. Service plans are prepared for National Parks and National Historic Sites, while conservation plans, community plans and area plans are elements of National Parks planning; and detailed plans related to collections, artifacts and special areas at larger sites are prepared for National Historic Sites.

A list of the state of management planning in parks and sites is included in Appendices 1 and 2 to this Report.

Research Effort. The *National Parks Act* now has placed a legislated time frame on the review period for management plans. Plans will be reviewed every five years, and new or revised plans will be tabled with Parliament. These provisions will require that increased attention be paid to structured research plans so that the availability of adequate data concerning resources and the use of parks and sites will be ensured.

In the field of specialized research on natural resources, Environment Canada relies on the services of other government agencies, universities and consultants in roughly equal amounts. The use of modern research techniques is increasing as resources are available. Electronic data processing, especially the use of Geographic Information Systems (GIS) is being used to increasing benefit, while technology such as satellite remote sensing or telemetry has yet to be adequately harnessed for parks and sites research.

The cultural resource research capability of Environment Canada is widely recognized. Innovations in cultural heritage resource research have included studies in architectural history, the study of everyday life in 18th-century Louisbourg, historical and underwater archaeology and the careful restoration of ships and canal locks. A number of research studies have earned both national and international recognition in areas of material history and culture, regional and local history, economic and social history.

In addition to research concerning the resources of parks and sites, regular studies on the attendance, behaviour and preferences of visitors are conducted. These research programs help to establish whether visitors are enjoying interesting and satisfying experiences in terms of diversity, amount and quality of facilities and services. They also determine the amount of use, and the costs and benefits of park

and site activities. Other research helps to find ways to encourage the broadest spectrum of Canadians to see and experience their natural and cultural heritage.

Environment Canada conducted its first National Market Survey in 1988, in order to determine the public's perception of the National Parks and Historic Sites, and to acquire a better understanding of what might trigger decisions to visit parks or sites. Summary results of pertinent parts of the survey are contained in Appendix 3.

In the field of data gathering technology, the Service has developed specialized computer systems for applying standard definitions and analytical methods to visit and use statistics. It has also developed supporting systems to collect these statistics as an automated by-product of administrative processes such as campground registration.

As well as these studies, which directly concern the use of parks and sites, there is cooperation with other agencies to integrate heritage research and studies into the broader context of national and regional considerations. Frequent coordination with Statistics Canada and Tourism Canada ensures that the parks and sites are fully integrated into national plans and analyses.

From 1937 to 1955 the SS *Klondike* steamed the Yukon River between Whitehorse and Dawson City with silver and lead ore as its main cargo. She was the largest of the sternwheelers in service on the Canadian section of the river and was the last in a long tradition going back to the 1880s. Now the SS *Klondike* sits, beached in her retirement, on the dry land of Whitehorse where she hosts thousands of passengers annually.

What her passengers see is the result of a unique partnership of the officers and crew of her working days with the historians, curators and engineers who restored her with loving care. Much of the personality of a working ship comes from her crew and they generously shared their mementoes and memories to give the restoration a personal authenticity.

The SS *Klondike* has won awards as well as devotees as a National Historic Site. Without the partnerships which restored her, she would just have become another ship without a soul as well as without a job.

Partnerships

Increasing public interest in environmental issues led Environment Canada to consider how it could provide this growing constituency with opportunities for active involvement with the National Parks and National Historic Sites systems. Such public involvement could help the department maintain and expand its traditional program, while accepting increased responsibilities to protect heritage resources. In another context, scientists at universities and research agencies have for many years recognized the value of parks and sites, observable in a protected state, and have used them as the basis of their research projects.

About a dozen years ago, the Parks Service began investigating ways to involve Canadians more directly in the parks and sites. This initiative coincided with an increasing interest by private citizens and groups who wanted in some way to contribute their time and talents to enhance the heritage they had come to admire, appreciate and even love.

Auyuittuq National Park Reserve

Examples of partnerships in other systems showed that volunteer and partnership arrangements were feasible and could be quite beneficial. In the United States, for example, there was an attractive record of assistance from volunteers and from local cooperating associations. During the past ten years, three very distinct program efforts in this area have been made by Environment Canada.

Cooperating Association Program. The original cooperating association model defined an association as a dedicated group of volunteers who would run a sales outlet in a park, publish some park-related literature and perhaps offer some public events. Such an association would receive up to $80,000 of contribution funding over a five year period, and after that would be financially independent. This classic description applies to some cooperating associations; however, variations on the model have evolved in many cases.

A cooperating association may undertake both revenue generating and non revenue generating services to the public beyond those normally provided by Environment Canada. Revenue generating activities ensure an association's financial viability, independence and capability to finance other activities. For these reasons, associations often have as an activity focus a sales or information outlet in or near a park or site. At these outlets, associations carry such items as park related publications, which they either develop to meet a local need or purchase from existing inventories.

There are associations that represent several of Environment Canada's Parks Service properties; some launch major fund-raising campaigns to support large projects; others sell parks or sites' related items wholesale, and operate no retail sales outlet; one runs a retail mail-order operation; another operates a historic park and charges admission to a building it converted into a museum and interpretation center; yet others emphasize service with little revenue generating emphasis; some operate revenue generating services such as period food outlets, restaurants, canteens and bakeries.

Cooperating associations improve community relations and involvement, and promote heritage awareness at the grass roots level. In 1984 the Nielsen Report pointed out that:

"The Minister of the Environment is able to offer parks visitors a higher quality experience through the contributions of associations of volunteers. Volunteers and the communities from which they come gain a sense of achievement through their contributions to the enjoyment of others.

The taxpayer benefits from a higher level of service than would otherwise be the case given the level of expenditure at the park or site, and any increase in tourism which results benefits that portion of the private sector which serves the travelling public."

By 1986, an informal network of cooperating associations had developed across Canada. Because of the common focus of their interests, the associations decided to establish the Canadian Parks Partnership, and to incorporate it as a non-profit umbrella group for their activities. The Partnership represents the interests of cooperating associations at national and international levels, publishes a newsletter twice a year, and helps develop heritage education programs with its members. It also provides support for associations, sponsors biennial workshops, and develops and sells a national product line of environmentally friendly theme items. Outstanding achievement by member associations is recognized by the Partnership's own national awards program.

Volunteer Program. Environment Canada's Parks Service's volunteer program has evolved in response to both public interest and needs within the department. In 1978 the program began in four National Parks and was later extended to all parks and sites.

Making a difference!

Imagine telling stories to an enraptured audience on a candlelight tour of the Fortress of Louisbourg. Or floating down the Rideau Canal on a sunny spring day with hundreds of others. Or dressing up and participating in the recreation of a historic military exercise, with the sounds of gunfire all around you. Or just talking with visitors to your local area, providing information, orientation and souvenirs to help them remember their stay. All these activities and many more are part of the proud work of cooperating association volunteers and staff working collaboratively with the Environment Canada.

- **Friends of the Trent-Severn Waterway, established in 1982, successfully manage 6 sales outlets, grossing $121,000 in 1988. The association also produces and sells specialty publications and organizes and runs special events, like the antique boat rally each spring. They participate in boat shows, and print guidebooks in English and French. Their free newsletter has won a national award of excellence.**
- **Info-Nature Mauricie makes imaginative use of a combination puppet theatre-information booth as a mobile sales outlet in the day-use areas of La Mauricie National Park, and at other locations in the wider community around the park. The association also operates two more conventional sales outlets and generates more than 50% of its overall revenue by operating two backcountry hostels in the park.**

The Canadian Parks Service Volunteer Program provides exciting opportunites for adventurous international visitors who wish to combine living overseas and volunteer work:

- **British citizens Kate Ainsworth and Rosie D'Souza were the first international volunteers engaged by the program. They spent a summer carrying out a number of volunteer projects at Terra Nova National Park. They liked it so much that they returned to spend another season as volunteers at Pacific Rim National Park.**
- **Peruvian conservationist Miriam Torres was an inquiring, energetic and inspiring presence around the Western Region office of the Parks Service for a few months in 1989. Miriam is probably the only person to have read all the service plan material produced to date for Mount Revelstoke/Glacier, Kootenay, Yoho, Jasper, Waterton Lakes and Pacific Rim National Parks! All of those who had the pleasure of working and speaking with Miriam had their minds opened and their hearts touched by her dedication and enthusiasm.**

The volunteer program has grown steadily. Its early focus on interpretation has now expanded to include a variety of park and site activities in all National Parks as well as at many National Historic Sites and Historic Canals. It provides opportunities for volunteers who have objectives consistent with those of Environment Canada to help in the preservation, protection and presentation of Canada's natural and cultural resources. The use of volunteers in parks and sites has augmented existing programs considerably, and has assured the completion of a number of additional projects.

The majority of volunteers are Canadian residents, but it is worth noting that the global reputation of the National Parks and National Historic Sites is attracting increasing numbers of volunteer applications from the United States and Europe.

Increasing environmental awareness and the desire of individuals to offer their services to assist park operations account for the tremendous potential of the volunteer program. Partnerships with this kind of motivation can only broaden Environment Canada's constituency, and supplement efforts in areas such as research, public information, and resource protection and management.

Partnerships with Universities. The Parks Service is establishing links with many universities and colleges. It anticipates strengthening these research, education and training partnerships. Such links, often defined by memoranda of understanding, exist with more than a dozen universities and colleges as well as with the Association of Canadian Universities for Northern Studies. In addition, there are frequent contacts and contracts with universities and individual scholars who recognize the parks and sites as important research resources.

Three examples of university partnerships are particularly worthy of note.

From 1983 to 1990, the department had a pilot agreement with the University of Waterloo to encourage cooperative research, education, training and information exchange in the fields of heritage protection and use. This arrangement assisted the creation of the University's Heritage Resources Centre in 1986. Environment Canada provided an annual contribution, some contract funding, and stationed one employee on campus. The annual value of the Centre's activities is now estimated at about two million dollars.

The department provides $18,000 a year to the Royal Ontario Museum in support of an intensive research program on the Burgess Shales in Yoho National Park.

The University of New Brunswick, using its own staff and that of six other universities, has recently completed a major forest fire study program in Wood Buffalo National Park. The study was carried out at no cost to the Service but with contributions of more than $600,000 from two foundation donors. This project is typical of the type of program available in cooperation with expert research groups.

It is not only the National Parks which are of value as benchmarks for scientific research, nor are the natural sciences the only disciplines which benefit from university—Parks Service associations. Considerable expertise has been developed in specialized artifact conservation disciplines, and this expertise is made available to universities through guest lectures, workshops and internships. National Historic Sites data and artifact collections are made available to scholars for study, and universities are often called upon for specialized analytic studies to complement departmental applied research.

In late December 1988, one million litres of toxic bunker oil spilled from a barge off Washington State. By January 3, 1989, winter storms had carried it 200 km northwest, to foul the beaches on the west coast of Vancouver Island — including those of Pacific Rim National Park. Most of the oil washed up in thick "pancakes" up to 2 metres across, and had the consistency of heavy molasses. And washed up with the oil were more than 3500 oil-coated seabird carcasses, mostly Common Murre and Cassin's Auklet.

Throughout January, hundreds of volunteers, a clean-up contractor and workers from federal and provincial departments struggled in storm-driven snow, rain and hail, to remove tons of oil-soaked debris from our beaches. Not an easy task, as more oil arrived each day with the tide. As one volunteer put it, "It's like trying to empty a bathtub with a teaspoon while it's still running... this is just a nightmare."

Armed with rakes and wheelbarrows, the clean-up crews scooped the oil into bags, which were trucked or airlifted off the shore. Flatbottomed barges, or "sea trucks", transported oil collected from the Broken Group Islands unit of the Park. By the end of the 8 week cleanup effort, more that 400 tons of thick black sludge had been removed from the park and surrounding area.

Other Partnerships. National Parks and National Historic Sites are part of a Canada-wide network of protected heritage places administered by all levels of government as well as some private agencies. For such a network to have any harmony at all, there is an obvious necessity for cooperative action among the wide range of agencies responsible for the policies, objectives and management of protected spaces. Over the years, both necessity and convenience have produced partnerships between governments for all manner of emergency responses such as forest fire suppression, land and wildlife management, research and marketing of resources for tourism and the use of compatible or even identical laws for law enforcement in and around parks and sites.

Within the federal government, coordinated programs with the Departments of Fisheries and Oceans and Transport are basic to the Marine Parks Policy while other partnerships with Indian and Northern Affairs are equally essential in the North. Tourism Canada and Statistics Canada are both important partners in the pursuit of national programs and standards. Partnerships with the Department of External Affairs ensure the continued operation of Campobello Island and Bethune House, while the Department of Communications, through the National Archives and National Museums, and the Department of National Defence are important partners in the researching of cultural and military history.

Yoho National Park

Banff National Park

National Parks and National Historic Sites have always been seen, at least in part, as basic elements in Canada's tourism activity. As such, some parks and sites offer sound commercial opportunities to private companies for the provision of services to visitors. From the beginning in Banff, the partnership between Canada and the private sector for the provision of visitor services has flourished. Lands leased to create various facilities gave rise to the communities which exist in the western and prairie parks. In other locations, concessions have been let to private commercial operators for everything from food services to boat rental, from the extensive development of ski hills to seasonal food concessions and canoe rental.

Environment Canada has developed a great deal of experience in partnerships with private entrepreneurs for the provision of services for parks visitors. As the need to focus efforts on the direct management of the resources of the parks and sites increases, it is likely that such partnerships will be expanded to other enterprises.

So, you're visiting relatives in Saskatchewan this summer? What else are you going to do while you are there? Have you checked out Lakescapes Saskatchewan?

It is a way of making sure that you, as a visitor, know all about an area in the north central part of the province. Any map will show you Prince Albert National Park, but do you know about Christopher Lake, McPhee Lake, or Candle Lake?

If you want to know more, consult Lakescapes Saskatchewan. It is a marketing program that tells you all about the full range of parks, golf courses, and resorts that are in the area for your enjoyment. By pooling their advertising dollars, national, provincial, regional and local tourist operators have produced something whose whole is greater than the sum of its parts. And how could anyone not find something which is fun to do in central Saskatchewan—certainly not anyone who has read the Lakescapes Saskatchewan brochures.

Environment Canada is a happy and satisfied contributor to this idea.

Progress Towards New Parks and Sites

Pacific Rim National Park Reserve

The Systems Plans

The Systems Plans provide the basis for establishing new National Parks and National Historic Sites. Planning the establishment of new parks and sites is a major aspect of the Parks Service's activities. Land ownership and use is a complex issue and requires cooperation among a multitude of public and private agencies. Environment Canada almost never has the benefit of complete control over planning processes.

Much of the systems planning work has already been done; National Park Natural Regions and major themes of Canadian history have been identified.

Representative areas of interest for National Parks have been selected in 14 of the 18 regions which are not represented in the present system.

Of the 18 unrepresented regions, active park proposals exist in:

Region 15, Canadian Shield, Tundra Hills: Bluenose Lake.
Region 16, Canadian Shield, Central Tundra Region: Wager Bay.
Region 17, Canadian Shield, Northwestern Boreal Uplands: East Arm, Great Slave Lake.
Region 24, Canadian Shield, Northern Labrador Mountains: Torngat Mountains.
Region 27, Hudson Bay Lowlands, Hudson-James Lowlands: Churchill.
Region 36, Arctic Lowlands, Western Arctic Lowlands: Northern Banks Island.
Region 37, Arctic Lowlands, Eastern Arctic Lowlands: North Baffin Island.

A park proposal which cannot presently be advanced exists in:

Region 21, Canadian Shield, East Coast Boreal Region: Mealy Mountains.

Additional work is required, in cooperation with provincial or territorial governments, to identify viable National Park proposals in the following regions:

Region 3, Western Mountains, Interior Dry Plateau.
Region 7, Western Mountains, Northern Interior Plateaux and Mountains.
Region 14, Interior Plains, Manitoba Lowlands.
Region 22, Canadian Shield, Boreal Lake Plateau.
Region 25, Canadian Shield, Ungava Tundra Plateau.
Region 28, Hudson Bay Lowlands, Southampton Plain.
Region 38, High Arctic Islands, Western High Arctic.

Regional analytical studies in the following three regions are incomplete:

Region 2, Western Mountains, Strait of Georgia Lowlands.
Region 20, Canadian Shield, Laurentian Boreal Highlands.
Region 23, Canadian Shield, Whale River Region.

Figure 8 summarizes these data.

South Moresby/Gwaii Haanas National Park Reserve

Examination of the representation of major historic themes has identified several gaps in the National Historic Sites program. From the Systems Plan, the following themes have been identified as having priority for representation either by acquisition or by cooperative development:

Short term	Long term
Fishing	Public Works
Basque Whaling	Mining
Ranching	Energy Development
Immigration	Commerce
Forest Products Industry	Manufacturing
Prairie Settlement	Canada and the World
Native History and Northern Native Commemoration	Agriculture
	Engineering and Architectural Achievement

The continuous quest for new parks and sites involves many parties: provinces and territories and, depending on the location, industries (mining, logging, farming), aboriginal groups, land owners, municipalities and other federal government agencies. Negotiations usually focus on relationships between national proposals and plans and programs for provincial and territorial parks and sites, opportunities for alternative resource use, the interests of other agencies, the interests of land holders and the land claims of native people.

Because of these sometimes competing considerations, the establishment process can be a long one. It is not unusual for an inventory of exploitable resources to be carried out to assess the full cost of a proposal. In the case of private ownership of land or resource exploration rights, the policy of "willing buyer–willing seller" can extend park acquisitions over decades.

Several National Park proposals are located in areas where comprehensive native land claims have been accepted by the federal government. In these cases, Environment Canada negotiates the nature and extent of the concerned aboriginal people's involvement in the management and planning of the parks.

National Park Reserves may be established pending the conclusion of the native land claims. In such reserves, the National Parks Act and regulations apply except for any traditional hunting, fishing and trapping activities undertaken by the aboriginal people. The boundaries may be changed in the transition from Reserve to National Park status, depending on the terms of the resolution of the claim.

The Kluane, Nahanni and Auyuittuq National Park Reserves were proclaimed in 1976, Mingan Archipelago Reserve in 1984, and Ellesmere Island Reserve in 1988. Pacific Rim and South Moresby Reserves are pending establishment as explained later in this Report. The Northern Yukon National Park bypassed Reserve status with the agreement to establish it directly as a result of the land claim process. Hopefully, this simplification of the process can be repeated in future.

Progress in the Last Five Years

Gulf of Georgia Cannery National Historic Site

Painting by Richard Schlecht
© National Geographic Society

During the past five years, negotiations of many years' standing have been concluded, new National Parks and National Historic Sites have been established, the first National Marine Park has been created, and negotiations have moved on to new areas and pursued new concepts. The extent of national involvement in the protection and commemoration of Canada's heritage has been significantly increased.

National Historic Sites. A number of important sites have been identified by the Historic Sites and Monuments Board of Canada and declared by the Minister as being of national historic significance. The following are the most important examples:

1. **Gulf of Georgia Cannery, Richmond, British Columbia:**
   This 19th-century cannery on the outskirts of Vancouver is an outstanding site which illustrates the history of one of Canada's most important resource-based industries. The complex was acquired in 1981 and stabilized in 1987–88.
2. **Alberta Ranching:**
   Alberta ranching represents one of the most important aspects of the settlement of the west. It is a significant symbol of the unique regional identity of that part of Canada. Approval of the Historic Sites and Monuments Board of Canada recommendation to acquire an historic ranch dates back to 1968–69. Three ranches with outstanding collections of historic structures were identified as being of national historic significance in 1989. All three are located southwest of Calgary in the foothills of the Rocky Mountains and have great visitor appeal. The ranching industry will be commemorated at one of these sites.
3. **Ryan Premises, Bonavista, Newfoundland:**
   This site was selected as the sole surviving site with sufficient extant resources to interpret the Labrador, international and sealing fisheries of Newfoundland. Many historical resources at the Premises are in jeopardy because of neglect, and will deteriorate further unless basic protective measures are undertaken soon. In addition, a proposed housing development on adjoining lands may isolate at least one of the original historic structures. Action is needed promptly to protect this outstanding resource associated with an industry fundamental to the history of Newfoundland and Canada.
4. **Grosse Île, Montmagny, Quebec:**
   The Grosse Île Immigration Station was established in 1832, on an island in the St. Lawrence River 40 km from Québec City; it was the most important such station in Canada for over a century. With approximately 50 of the Immigration Station structures still standing, the complex is an outstanding resource with which to interpret

the immigration theme that is central to the settlement and multicultural character of Canada. Acquisition is being considered. Many of the important historic structures had not been maintained, were exposed to the elements, and had deteriorated substantially. Interim conservation measures are underway to retain these outstanding cultural heritage resources.

5. **Red Bay, Labrador, Newfoundland:**

Red Bay on the Straits of Belle Isle is associated with the Basque whaling fleet that began operating in this part of the North Atlantic early in the 16th century. Archaeological discoveries include sunken Basque vessels well-preserved in these frigid waters, and on-shore sites for the processing of whales. Environment Canada, the province and the municipality are currently negotiating agreements that would make possible the development of a cultural tourism destination befitting this site of international significance which contains evidence of some of the earliest European economic activity in the New World.

6. **Northern Native History:**

The absence of sites that effectively commemorate the history of the native peoples of northern Canada is one of the serious deficiencies in the existing system of National Historic Sites. In 1989, the Minister of the Environment approved a Historic Sites and Monuments Board of Canada recommendation calling for a major effort to commemorate the history of the Inuit and Dene-Metis in the Northwest Territories and the history of the Yukon First Nations. Implementation of this proposed cultural commemoration program will require the completion of thematic studies in direct consultation with native peoples.

The establishment and development of new National Historic Sites from these studies may take up to 10 years. However, it is imperative that studies and consultations begin as soon as possible in order to ensure the identification and protection of important sites that will otherwise be lost.

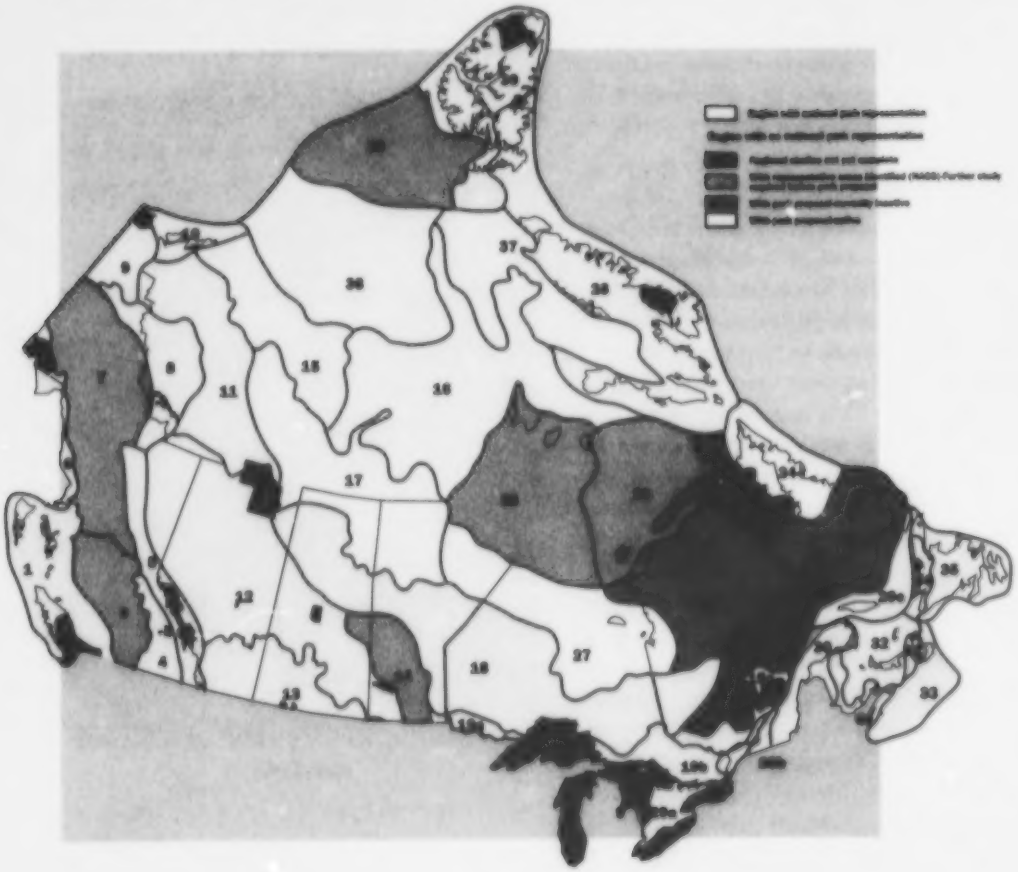
In the early 16th century, the oil that lit the lamps of Europe did not come out of holes in the ground, but from whales of the sea. Brave men of the Basque whaling fleet sailed thousands of miles in frail boats to exploit the teeming fisheries of the cold and stormy waters of the New World.

The Straits of Belle Isle was one of the whaling grounds and Red Bay was the main base. In a major cooperative venture Environment Canada, the province of Newfoundland and Labrador and Memorial University have sponsored and carried out archaeological explorations of both the underwater and onshore areas.

A treasure of sunken Basque vessels, well preserved in these frigid waters has been found and explored. Sites for the processing of whales have been uncovered on the shore and there is little doubt that further evidence awaits discovery.

Today, the cooperation among Canada, the province and the local community is being used to present this historical record of intrepid adventure in the search for commerce in new environments.

National Park Natural Regions
Status of Representation



WESTERN MOUNTAINS

1 Pacific Coast Mountains
2 Strait of Georgia Lowlands
3 Interior Dry Plateau
4 Columbia Mountains
5 Rocky Mountains
6 Northern Coast Mountains
7 Northern Interior Plateaux and Mountains
8 Mackenzie Mountains
9 Northern Yukon Region

INTERIOR PLAINS

10 Mackenzie Delta
11 Northern Boreal Plains
12 Southern Boreal Plains and Plateaux
13 Prairie Grasslands
14 Manitoba Lowlands

CANADIAN SHIELD

15 Tundra Hills
16 Central Tundra Region
17 Northwestern Boreal Uplands
18 Central Boreal Uplands
19 (a) West Great Lakes - St. Lawrence Precambrian Region
(b) Central Great Lakes - St. Lawrence Precambrian Region
(c) East Great Lakes - St. Lawrence Precambrian Region
20 Laurentian Boreal Highlands
21 East Coast Boreal Region
22 Boreal Lake Plateau
23 Whale River Region
24 Northern Labrador Mountains
25 Ungava Tundra Plateau
26 Northern Davis Region

HUDSON BAY LOWLANDS

27 Hudson-James Lowlands
28 Southampton Plain

ST. LAWRENCE LOWLANDS

29 (a) West St. Lawrence Lowland
(b) Central St. Lawrence Lowland
(c) East St. Lawrence Lowland

APPALACHIAN

30 Notre Dame - Megantic Mountains
31 Maritime Acadian Highlands
32 Maritime Plain
33 Atlantic Coast Uplands
34 Western Newfoundland Island Highlands
35 Eastern Newfoundland Island Atlantic Region

ARCTIC LOWLANDS

36 Western Arctic Lowlands
37 Eastern Arctic Lowlands

HIGH ARCTIC ISLANDS

38 Western High Arctic Region
39 Eastern High Arctic Glacier Region

National Parks. In National Parks, the following major achievements of the past five years are worthy of record.

1. **Pacific Rim National Park Reserve** (Region 1, Pacific Coast Mountains)

   Canada and British Columbia signed an agreement in April 1970, to create Pacific Rim National Park. The park was to include three parts: Part I, the Long Beach area; Part II, the Broken Group Islands area; and Part III, the West Coast Trail area. The final boundary of Part III was to be agreed upon after the 1970 agreement. (Minor amendments to the 1970 agreement were signed in 1973 and 1977).

   Canada and British Columbia agreed to share the cost of buying out third party interests (primarily forest interests) on a 50-50 basis.

   In 1987, following a series of studies concerning land and resource values, the final boundaries for Pacific Rim National Park, including the spectacular Nitinat Triangle wilderness area, were confirmed under an amended agreement. Some 98% of the park lands have been transferred to Canada. Once all lands are transferred and pending the disposition of the Nuu-Chah-Nulth Land claim, proclamation of the park reserve under the *National Parks Act* will proceed.

2. **Ellesmere Island National Park Reserve** (Region 39, Eastern High Arctic Glacier Region)

   Situated on the most northerly lands in Canada, only about 660 km from the North Pole, this National Park Reserve was first proposed in 1978. Spectacular mountain scenery, icefields and internationally significant archaeological sites are all found here.

   Extensive consultations among Inuit people from the closest communities of Grise Fiord and Resolute Bay, and the governments of the Northwest Territories and Canada concluded with a Park Reserve agreement in 1986. The Park Reserve was set aside under the *National Parks Act* in 1988. Park Reserve status is appropriate for Ellesmere because of its location on lands subject to land claims negotiations with the Tungavik Federation of Nunavut.

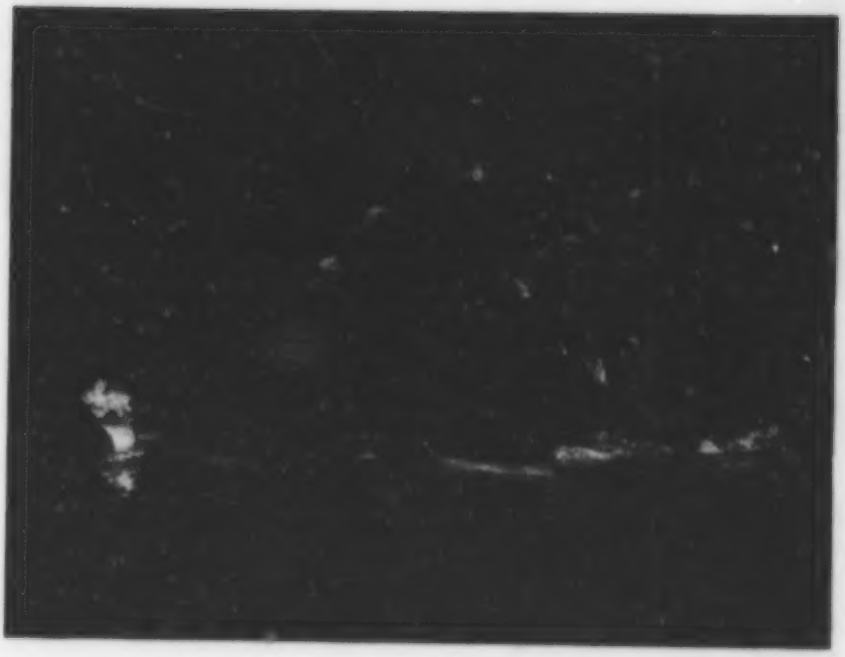


Figure 8

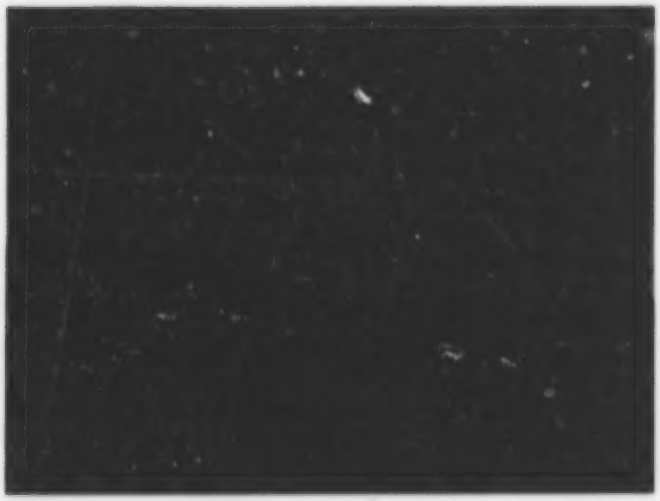
Pacific Rim National Park Reserve

Park operations were initiated in 1987. Limited facility and program development has been undertaken according to the provisions of the 1986 park agreement and interim management guidelines. Preparation of the park management plan will begin in 1990–91.

3. **Bruce Peninsula National Park** (Region 29a, West St. Lawrence Lowlands)

   In December 1981, the Minister of the Environment announced that public consultation would begin to determine the feasibility of establishing a new National Park on the Bruce Peninsula, which contains one of the few extensive landscapes south of the Canadian Shield in Ontario that remains in a natural state.

   In September 1986, the governments of Canada and Ontario reached an agreement in principle on the major issues facing park establishment. On July 20, 1987, a joint agreement creating a new National Park was signed. The



park created, Bruce Peninsula National Park, also encompasses Canada's first National Marine Park.

Environment Canada is working on completion of the park's land assembly process. Provincial Crown lands will be transferred to Canada, and private lands will be purchased by Canada on a willing seller-willing buyer basis over several years. Management planning is underway.

4. **Fathom Five National Marine Park** (Marine Region Great Lakes 2, Georgian Bay)

The concept of an underwater park to protect the shipwrecks off the coast of Tobermory was first suggested in 1968. In 1972, the Province of Ontario established Canada's first underwater park, Fathom Five Provincial Park.

During the public consultation programs to establish the Bruce Peninsula National Park, it was recommended locally that Fathom Five Provincial Park be included as part of the National Park proposal. On July 20, 1987, the governments of Canada and Ontario signed an agreement establishing both Fathom Five National Marine Park and Bruce Peninsula National Park.

5. **Grasslands National Park** (Region 13, Prairie Grasslands)

Starting in the mid-1950s, significant interest developed among Canadian conservationists for a National Park representative of the prairie grasslands. In 1970, a Memorandum of Intention for a proposed National Park in Saskatchewan was signed by the federal and provincial governments. Public hearings in 1976 revealed qualified support for such a park.

In 1981, Canada and Saskatchewan signed an agreement to establish Grasslands National Park in the Killdeer Badlands and Frenchman River area of southwestern Saskatchewan. Environment Canada began to set up Grasslands, purchasing 140 square kilometres of land in the Frenchman River area. However, acquisition of additional land for the park stopped when conditions in the agreement on oil and gas exploration and water resource management proved unworkable.

Over the following five years these issues were renegotiated. A coalition of national and regional non-government conservation organizations helped both governments to reach mutually acceptable solutions, particularly on the water resource management question. In September 1988, a new agreement was signed to protect the park's important natural and cultural resources.

Oil and gas development has been prohibited in the Grasslands National Park area, and Canada is acquiring third party interests in the park area on a willing seller-willing buyer basis. Environment Canada is developing interim guidelines for vegetation and wildlife management and for visitor activities and facilities.

6. **South Moresby/Gwaii Haanas National Park Reserve** (Region 1, Pacific Coast Mountains, Marine Regions: Pacific Ocean 1 and 2, Hecate Strait and West Queen Charlotte Islands)

Following active pro-conservation lobbying efforts by private and native groups concerned that logging in the area would jeopardize a diverse array of natural and cultural resources, Canada and British Columbia signed a Memorandum of Understanding in July 1987, for the establishment of a National Park Reserve

and a National Marine Park Reserve in South Moresby. In July 1988, the formal Canada-British Columbia South Moresby Agreement was signed. The agreement provides that Canada and British Columbia will share the costs of forestry compensation, while Canada will compensate non-forestry third party interests.

For the interim protection of the park reserve lands, British Columbia has authorized Canada to administer the lands on behalf of British Columbia, using provincial legislation. The final boundary of the proposed National Marine Park Reserve will await the outcome of an assessment of the mineral and energy resource potential of the area.

As an integral part of the park agreement, a regional development initiative is underway to encourage diversification of the Queen Charlotte Islands' economy, to improve transportation facilities, to support small business development, to support silvicultural projects and to ease the adjustment from logging to tourism.

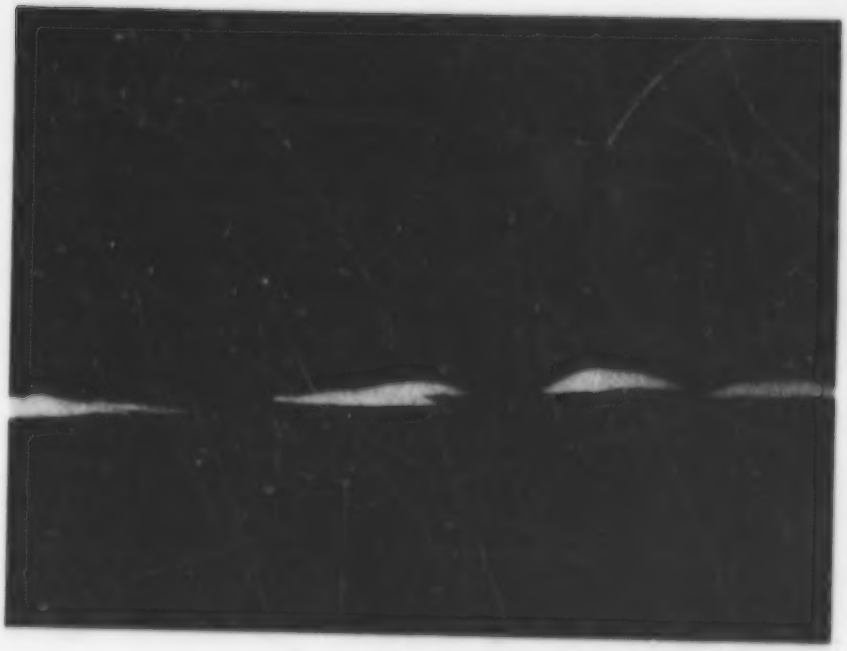
Canada and the Haida are negotiating an agreement concerning cooperation in the planning, operation and management of the National Park Reserve.

7. **Saguenay Fjord, Quebec** (Marine Region, Atlantic Ocean No. 9, St. Lawrence River Estuary) Following studies which identified the Saguenay Fjord as a natural area of Canadian significance and assessed the feasibility of creating a marine park, public consultation and workshops held in 1986 and 1988 concluded that a marine park was both viable and appealing. Negotiations between Canada and Quebec in 1988 led to a federal-provincial study of the area. In April 1990, a Memorandum of Agreement was signed by Ministers of both governments to create a marine park in this spectacular but threatened area of the St. Lawrence estuary.

Under this agreement, the governments of Canada and Quebec each have six months to introduce legislation or regulations creating the marine park, in keeping with their respective jurisdictions. The definitive boundaries of the park will be established following joint public consultation to be held within nine months of the signing of the agreement. Under the agreement, special attention will be given to the concerns of local residents. The public consultations will give them a say in the process of deciding the boundaries of the marine park. In addition, residents will be called upon to provide advice on each phase of development.

Map 3 illustrates the marine regions framework and indicates the regions which are currently represented adequately by National Marine Parks.

Elsewhere, Marine Park proposals have been put forward in three more regions (Atlantic Regions 6 and 9, and Arctic Region 5). Regional analysis to identify potential new Marine Parks is underway in five others (Atlantic Regions 1, 2 and 7, and Arctic Regions 1 and 2).



Gros Morne National Park

South Moresby/Gwaii Haanas National Park Reserve

Current Activity

National Historic Sites. For the National Historic Sites program, the Systems Plan is being implemented through research into the 15 priority themes that have been identified as worthy of representation by National Historic Sites. Because of the need for thorough research and identification it will probably take until 1995 for Environment Canada to be in a position to consider the acquisition of sites associated with these themes. The following "report card" indicates the current state of the investigation, and gives a hint of future prospects.

Environment Canada expects to commence negotiations on the following initiatives shortly.

1. **Manufacturing in Canada:**
   Manufacturing is clearly a theme of great historic importance. Given the rate at which early manufacturing sites are being destroyed in the continuing redevelopment of our cities, there is a particularly pressing need to identify and protect historic resources that are outstanding examples of this theme. There may well be potential here for cooperative ventures with the business sector and other interests. The thematic overview is almost ready for initial review by the Historic Sites and Monuments Board of Canada.
2. **Energy development—Hydroelectricity:**
   Hydroelectric power has been a key factor in the development of much of the Canadian economy. It is also a field in which Canada has been a world leader. Identification and protection of outstanding sites associated with the history of this theme are thus very high priorities. Following 1986 Board recommendations, the department is currently concentrating its efforts in this field on Quebec, in cooperation with Hydro-Quebec. Using an inventory prepared by the corporation, the Parks Service is assessing the historic resources at a number of generating stations.
3. **Manufacturing—Textile Industry:**
   The Board singled out several sites in Ontario and Quebec in November 1989. Implementation of these recommendations will be integrated with the Manufacturing theme.
4. **Mining in Canada:**
   In 1984 the Board recommended focusing on hardrock mining in northeastern Ontario and northwestern Quebec as a first priority, particularly in view of what has already been accomplished by the province of Nova Scotia in the commemoration of coal mining.
5. **Lumbering, Ottawa Valley and New Brunswick:**
   The 19th-century lumbering industry was of great importance in the development and settlement of these two parts of Canada.

Pulp and paper industry

6. Pulp and Paper Industry, Quebec:

This is another of Canada's major resource-based industries. Studies of relevant historic resources in the Trois-Rivières and Lac St. Jean regions have been started.

7. Seigneurial Regime in Quebec:

The seigneurial regime had a major influence on settlement and social and economic development in Quebec for two centuries. Much of the cultural landscape evidence of this system is being lost as both the urban communities and rural land use patterns of Quebec are currently being radically transformed. Identification and protection of historic resources associated with the seigneurial regime is a high priority.

8. Oil and Gas in Alberta:

The Alberta oil and gas industry, established before World War I, assumed national importance shortly after World War II. Environment Canada has initiated studies related to this theme in response to a request from Alberta concerning possible cooperative action on development of a historic site.

Cooperative Initiatives. In addition to the direct acquisition and commemoration of National Historic Sites by Environment Canada, there is also a cooperative program with others for the joint funding of projects, including interpretation and visitor facilities. Initially, the program covers only capital expenses, although theoretically it can also apply to the sharing of operating costs. The following sites are of high priority:

- The McLean Mill, Port Alberni, British Columbia
- Manitou Mounds, near Fort Frances, Ontario
- Four Prairie Settlement Sites (Koral Farmstead, Manitoba; New Bergthal, Manitoba; Denyschuk Farmstead, Manitoba; Stirling, Alberta)
- Wanuskewin, near Saskatoon, Saskatchewan
- Haida Sites, British Columbia
- Kitselas Canyon, British Columbia
- Cluny Earthworks, Alberta.

National Parks. Four of the five national park proposals now being actively pursued are in the north and several are directly linked to the comprehensive land claims settlement process; the other is in Manitoba. Progress on these proposals will depend on the priorities and aspirations of the various participants and on the success of negotiations, frequently complicated, to resolve issues of alternative uses, resource management responsibility and acquisition processes. The active National Park proposals are:

1. Bluenose Lake, Northwest Territories

(Region 15, Tundra Hills)

This is a land of plains and lowlands, of patterned ground, pingos and tundra. Included within the proposed park are such features as the spectacular Hornaday River Canyon and La Ronciere Falls, the dissected Melville Hills, the calving ground of the Bluenose caribou and abundant wildlife, including caribou, muskox, grizzly bear and wolf.

Environment Canada has been working to establish a National Park in this Natural Region for a number of years. Three areas were identified in 1984; one of these, at Bathurst Inlet, had been proposed as a National Park as early as 1978. However, subsequent geological studies showed that the Bathurst Inlet area has a high mineral potential and the proposal was abandoned.

In 1989 the Inuvialuit expressed strong interest in establishment of a National Park in the Bluenose Lake area to protect the Bluenose caribou and calving grounds. A park feasibility study concluded that the area was indeed representative of its Natural Region and has good National Park potential.

Consultations with local Inuvialuit began in December 1989, and are proceeding. Studies will be initiated in 1990 to collect better information about land use, cultural resources, mineral potential, vegetation, wildlife and other biophysical resources.

Land ownership is the outstanding issue related to this proposal. The proposed park boundary includes Inuvialuit lands along the coast, and the possible transfer of these lands to the Crown will be addressed during park negotiations. About 40 percent of the proposed park lies within the area of the Tungavik Federation of Nunavut claim; the future use and ownership of this area have yet to be negotiated.

2. Wager Bay, Northwest Territories (Region 16, Canadian Shield, Central Tundra Region)

Wager Bay is a fault basin surrounded by rocky plateaux which has created a deep inlet on Hudson Bay. Barren ground caribou are common throughout the area and polar bears are regular residents along the shore. Walrus, and ringed and bearded seals are common in the coastal area. Open, ice-free water areas near the mouth of the inlet and at the Reversing Falls below Ford Lake make the area attractive to a variety of marine mammals who can spend the winter in such waters.

Inuit habitation of the area spans the last 4000 years and prehistoric stone remains exist along the shore. The Hudson's Bay Company established a post at Tushyooyuk in 1925. The location is now called Ford Lake and is at the western end of Wager Bay.

A boundary proposal will be identified in the coming year for consideration in the Tungavik Federation of Nunavut land claim.

3. East Arm of Great Slave Lake, Northwest Territories (Region 17, Northwestern Boreal Uplands)

This is a region of ridge after low ridge of granite or gneiss, of innumerable interlocking lakes and tumbling rivers, and of endless spruce forests. It is also an area rich in fish and wildlife, including lake trout and pike, caribou, beaver, lynx, otter and other furbearers.

In 1970, the lands being considered for this proposed park were withdrawn under the *Territorial Lands Act*. This withdrawal has prevented the sale or lease of the land as well as the exploration and exploitation of mineral or energy resources in the area. Discussions and negotiations were later postponed because of concerns expressed by the community of Snowdrift about possible effects of the park on traditional native uses and lifestyle. Negotiation of the Dene/Metis land claim led to a resumption of discussions in 1984. Recent progress on the Dene/Metis land claim settlement process requires that this proposal be reviewed in the immediate future.

There is an apparent lack of support for park establishment from the community of Snowdrift, and Environment Canada has made it clear that the park will only be established if there is community support. Further consultation is necessary.

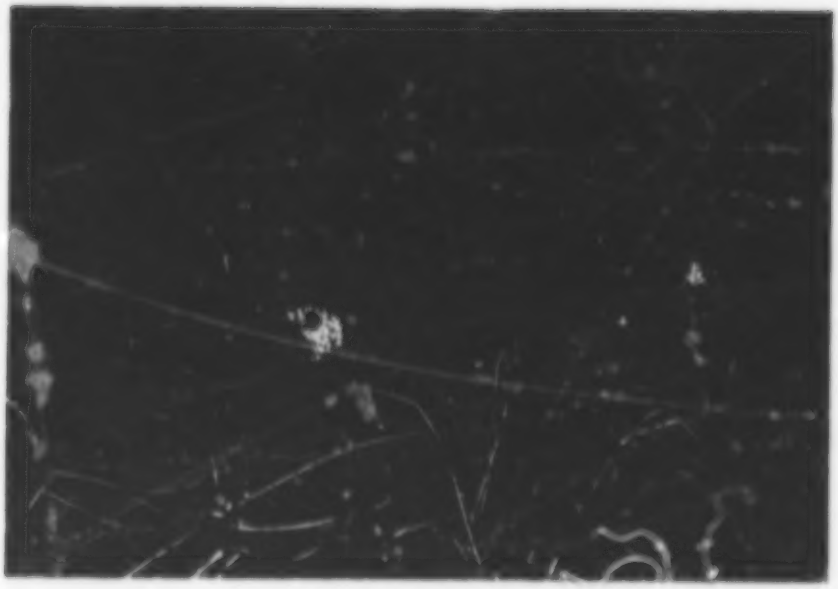
4. Torngat Mountains, Labrador (Region 24, Northern Labrador Mountains Region)

The Torngat Mountains, which lie along the northeast coast of Labrador, were first proposed as a potential National Park in the early 1970s. The Torngats provide outstanding representation of the Northern Labrador Mountains. The area contains the highest mountain peaks (approximately 1300 m), and the most rugged and spectacular bay and fjord coast of mainland eastern North America. Arctic wildlife is well established in the area, including polar bear, arctic fox, barren ground caribou, Rock Ptarmigan, and Snowy Owls among other species. Important isolated boreal or treeline species, such as black bear, occur along the sheltered valleys at the head of canyon-like fjords. Less than 100 years ago, this area was inhabited by a large and vigorous Inuit population whose villages could be found in nearly every fjord and protected bay. Trading posts, government stations, and Moravian Mission settlements connected the area with the outside world. Fleets of fishing vessels operated off the coast. The area has been abandoned for several decades and it has reverted to a wilderness state.

Public discussions concerning the feasibility of establishing a National Park in the Torngat Mountains area were initiated by the Canadian Parks Service and the Government of

Banks Island

Ellesmere Island National Park Reserve



Newfoundland in the mid 1970's. However, this activity was suspended in 1979 when it became apparent that settlement of the Labrador Inuit Association land claim was required before park establishment could continue. This year, at the invitation of the Association, Environment Canada and the Province have resumed discussions with the native people.

5. Churchill, Manitoba (Region 27, Hudson-James Lowlands)

An analysis of the Hudson-James Bay Lowlands Natural Region concluded that the Cape Churchill-York Factory area provides a good representation of the region and has potential for National Park status. Of special note is the extent of the polar bear denning sites in the area.

In September 1989, Canada and Manitoba announced the establishment of a joint Working Group to consult with the residents of the Churchill area concerning the establishment of a National Park. The Working Group initiated information collection and consultations in December 1989, and a final report on park feasibility is expected in the summer of 1990. If a National Park is shown to be feasible and to have sufficient support, the next step would be to reach a federal-provincial park establishment agreement. This will require the support and cooperation of the residents of the Churchill region and the government of Manitoba.

6. Northern Banks Island, Northwest Territories (Region 36, Western Arctic Lowlands)

In an area of spectacular river canyons and desert-like badlands, Northern Banks Island also has bold seacoasts, large ice-covered lakes and abundant wildlife. The rolling hills and lush valleys of the Thomsen River provide some of the best muskox habitat in Canada.

Environment Canada has proposed a National Park on northern Banks Island, and initial planning work and technical studies are complete. All of the key parties, including the government of the Northwest Territories, the Department of Indian and Northern Affairs and the Department of Energy, Mines and Resources are supportive of the park proposal.

Consultations with the community of Sachs Harbour and the government of the Northwest Territories have been reactivated.

A recent proposal for a large-scale commercial muskox harvest on Banks Island may result in pressure to reduce the size of the proposed park. There is local interest in National Park establishment, but not yet clear support. Further consultations are required.

7. Northern Baffin Island, Northwest Territories (Region 37, Eastern Arctic Lowlands)

This is a land of rock desert and frozen coastline, where the land rises abruptly to a high plateau slashed by spectacular fjords with sheer cliffs, and has a climate that is bitterly cold, with short, cool summers and long, dark winters. Vegetation and wildlife are sparse, but the marine waters support an unusually rich flora and fauna.

In 1987, following studies of the resources of the area, formal consultations (interdepartmental, intergovernmental and with local residents) regarding a proposal to create a National Park and a National Marine Park side by side in the Bylot Island-Lancaster Sound-northern Baffin Island area were initiated.

Consultations have been underway for the past several years, focusing on the local communities of Pond Inlet and Arctic Bay. Mineral and energy resources assessments and natural resources studies have been completed.

The local perception is that a Marine Park would not address concerns related to the control of marine transportation and oil and gas exploration and development, and that it would restrict polar bear sport hunting—an important economic activity. There is no local support for a National Marine Park. Consultations are now focused on the National Park Proposal, for which there is stronger community interest.

The terms of settlement of the Tungavik Federation of Nunavut Land claim could affect park establishment. Land selection as part of land claims settlement may remove features which are important to the representation of the Natural Region from the proposed park.

National Marine Parks. It is probable that by the year 2000 the Atlantic and Pacific ocean environments plus the Great Lakes and the St. Lawrence Estuary will each be represented in the evolving National Marine Parks System. The program is a new one and some years will be required to bring the completion of a comprehensive system.

In some southern Marine Regions opportunities to create additional National Marine Parks are very limited. This is particularly true of Pacific Region 5 and Great Lakes Regions 4 and 5, where competing water uses such as high levels of recreational boating and fishing and the rapid expansion of recreational fisheries for introduced species are making the representation of natural water areas less possible.

Opportunities to establish Marine Parks in Atlantic Region 6 and Pacific Region 5 are also being increasingly constrained by the expanding aquaculture industry.

No target date can yet be established for the completion of the National Marine Parks System, but Environment Canada is preparing a strategy for the creation of additional National Marine Parks beyond the time frame of the Green Plan. An integral part of any such strategy will be recognition of the pivotal role of the provincial and territorial governments, and of other federal agencies with key roles in the management of ocean resources and activities, in creating new National Marine Parks.

Awareness of the benefits of a Marine Parks program has not yet been fully developed. Given the importance of completing Canada's National Parks system, it is necessary to address both terrestrial and marine areas which need protection, with priority for protection being granted to the most threatened environments in Canada.

Kluane National Park Reserve

South Moresby/Gwaii Haanas National Park Reserve

Conclusion

Canada's National Parks, National Historic Sites and Historic Canals systems are, by most available measures, in a satisfactory state. They represent one of the largest and most-respected systems in the world, growing in size and evolving in concept. Each is based on thematic representation of the natural and cultural heritage and both parks and sites are guided by systems plans. Identification of new parks and sites is well advanced and negotiations for expansion of the systems have a continuing priority. New concepts of shared management and partnership programs have been the distinctive features of most recent negotiations for park and site systems expansion.

The systems are not without problems. Like all lands and buildings, they are threatened by global phenomena; climate change and acid rain are perhaps the two most frequently cited. There is always the threat that too much popularity will translate to overuse and deterioration of the resources; new management techniques are dealing with this, but more are needed.

The management of lands, buildings and visitation in systems as extensive as the National Parks, National Historic Sites and Historic Canals is a complex task both in the extent and the complexity of the resources. The addition of new parks and sites strains the resources needed to manage and develop the systems. Maintenance of facilities, protection of resources and provision of services to a growing number of visitors are all expensive responsibilities and, in the recent years of fiscal restraint, they have shared priority with the need to expand the systems. It is inevitable that the priorities that evolve under such conditions will not fully achieve all objectives or standards.

A combination of priorities to extend, or complete the systems and concern for day to day management of the use of the parks and sites will require an increased emphasis on the use of science and innovative technology to gain a fuller understanding of what resources we have and how they function. One priority must be the development of comprehensive objective criteria by which the state of the parks and sites can be better identified and evaluated.

National Parks and National Historic Sites are vital components of *Canada's Green Plan*. Goals include agreements for new parks to essentially complete the system by the year 2000, as well as the representation of an additional fifteen historic themes and the establishment of six National Marine Parks. Other commitments of the *Green Plan* involve the reduction of the threat of forest fires; management of parks and sites as examples of ecological integrity, regional integration and sustainable development; improved staff training in resource protection; the use of parks as living laboratories of environmental science; and developing the capability for the conservation of archaeological and historic resources. In the context of environmental education, there is also a major commitment to expanding the use of parks, sites and canals as ideal places to spread the messages of environmental conservation.

Canada's Green Plan confirms the government's commitment of having 12% of the Canadian landscape in some form of protected status. The system completion goals now being pursued by the Canadian Parks Service of Environment Canada will ensure that at least 25% of that commitment will be fulfilled by the highest level of legislated protection available, namely that afforded by National Parks, National Marine Parks, National Historic Sites and Historic Canals.

Chilkoot Trail National Historic Site

Appendices

Appendix 1; The State of Planning — National Parks

National Park	Management Plan	Service Plan	Conservation Plan
Newfoundland			
Gros Morne	1984		1989
Terra Nova	1987	In Progress	1984
New Brunswick			
Fundy	1990	1990	1989
Kouchibouguac	In Progress	In Progress	1985
Nova Scotia			
Cape Breton Highlands	1986	1990	1989
Kejimkujik	1986	In Progress	1988
Prince Edward Island			
Prince Edward Island	1986	In Progress	1990
Quebec			
Forillon	1988	1990	1981
La Mauricie	1979, 1990	In Progress	1987
Mingan Archipelago	IMG 1986	In Progress	In Progress
Saguenay			
Ontario			
Bruce Peninsula	IMG 1988	1990	In Progress
Fathom Five (Nat. Marine Pk)	1990	In Progress	In Progress
Georgian Bay Islands	IMG 1985	Concept 1989	1988
Point Pelee	1982	1990	In Progress
Pukaskwa	1983	1990	1987
St. Lawrence Islands	1986	1990	1990
Manitoba			
Riding Mountain	1987	1988	1988

* *IMG — Interim Management Guidelines*

National Park	Management Plan	Service Plan	Conservation Plan
Saskatchewan			
Grasslands	IMG 1990	Concept	In Progress
Prince Albert	1987	In Progress	1986
Alberta			
Banff	1988	In Progress	1986
Elk Island	1978	Data Base 1990	1987
Jasper	1988	1990	1984
Waterton Lakes	1978	Interim 1989	1987
British Columbia			
Glacier	1989	Interim Strategy	1984
Kootenay	1988	1989	Interim 1986
Mount Revelstoke	1989	Interim Strategy	1984
Pacific Rim	1973, 1981	Interim 1989	1982
South Moresby/Gwaii Haanas	IMG In Progress		
Yoho	1988		1985
Northwest Territories			
Auyuittuq	IMG 1982	Concept 1989	
Ellesmere Island	IMG 1988		
Nahanni	1986	1990	1986
Wood Buffalo	1984	In Progress	1985
Yukon			
Kluane	1990	1987	1984
Northern Yukon	IMG 1988		Interim 1987

Appendix 2; The State of Planning — National Historic Sites

Province — Sites	Management Plan
Newfoundland	
L'Anse aux Meadows	
Cape Spear	1980
Castle Hill	Themes and Objectives 1982
Hawthorne Cottage	
Hopedale Mission	
Port au Choix	1990
Signal Hill	1986
New Brunswick	
Beaubears Island	
Carleton Martello Tower	IMG 1978
Fort Beauséjour	1978
Fort Gaspareaux	
St. Andrews Blockhouse	Themes and Objectives 1983
Nova Scotia	
Alexander Graham Bell	In Progress
Fort Anne	1984, being reviewed
Fort Edward	Themes and Objectives 1987
Fortress of Louisbourg	In Progress
Grand Pré	1985
Grassy Island	1983
Halifax Defence Complex	IMG 1989
• Halifax Citadel	1979
• Fort McNab	In Progress
• George's Island	In Progress
• York Redoubt	In Progress
• Prince of Wales Tower	In Progress
Marconi	Concept 1990
Port Royal	Themes and Objectives 1980
St. Peters Canal	
Prince Edward Island	
Ardgowan	IMG 1979
Fort Amherst-Port la Joye	Themes and Objectives 1984
Province House	IMG 1977

* IMG — Interim Management Guidelines
* IMP — Interim Management Plan

Province — Sites	Management Plan
Québec	
Battle of the Châteauguay	Concept 1976
Battle of the Restigouche	1984
Carillon Barracks	1985
Sir George-Étienne Cartier	Themes and Objectives 1980
Cartier-Brébeuf	
Chambly Canal	1990
Coteau-du-Lac	1986
Les Forges du Saint-Maurice	1981
Fort Chambly	1981
Fort Lennox	IMG 1983
Fort Témiscamingue	In Progress
Artillery Park	1980 (draft)
Fort No. 1, Pointe-Lévis	1988
The Walls and Fortifications of Québec	1988
Fur Trade at Lachine	Themes and Objectives 1979
Grande-Grève	see Forillon NP
Grosse Île	In Progress
Lachine Canal	1979
Sir Wilfrid Laurier	Themes and Objectives 1980
Louis-Joseph Papineau	Themes and Objectives in progress
Pointe-au-Père Lighthouse	Themes and Objectives 1980
Sainte-Anne-de-Bellevue Canal	1978 (draft)
Saint-Ours Canal	1978 (draft)
Louis S. St. Laurent	1981
Maillou House	

Province — Sites	Management Plan
Ontario	
Battle of the Windmill	see Fort Wellington
Bellevue House	IMG 1980
Bois Blanc Island Lighthouse	see Fort Malden
Butler's Barracks	1983
Fort George	1985 (draft)
Fort Malden	1980
Fort Mississauga	IMG 1983
Fort St. Joseph	1977
Fort Wellington	1988
Inverarden House	1976
Sir John Johnson House	
Laurier House	In Progress
Kingston Martello Towers	
Navy Island	see Fort George
Point Clark Lighthouse	Themes and Objectives 1980
Queenston Heights	Themes and Objectives 1981
Rideau Canal	In Progress
Sault Ste. Marie Canal	IMP 1982
Southwold Earthworks	1982
Trent-Severn Waterway	In Progress
Woodside	In Progress
Manitoba	
The Forks	1986
Linear Mounds	
Lower Fort Garry	In Progress
Prince of Wales Fort	
Riel House	Themes and Objectives 1976
St. Andrew's Rectory	1983
York Factory	1987
Saskatchewan	
Batoche	1982
Battle of Fish Creek	
Fort Battleford	1988
Fort Espérance	
Fort Pelly	
Fort Walsh	In Progress
Motherwell Homestead	1990

Province — Sites	Management Plan
Alberta	
Banff Museum	see Banff NP
Cave and Basin	see Banff NP
Jasper House	see Jasper NP
Rocky Mountain House	In Progress
Yellowhead Pass	
British Columbia	
Chilkoot Trail	1988
Fisgard Lighthouse	see Fort Rodd Hill NHS
Fort Langley	1987
Fort Rodd Hill	1986
Fort St. James	In Progress
Gulf of Georgia Cannery	
Kitwanga Fort	1981
Ninstints	
Rogers Pass	see Glacier NP
St. Roch	
Yukon	
Dawson City Buildings	1978
Dredge No. 4	1988 (part of area plan)
Gold Room at Bear Creek	1988 (part of area plan)
SS *Keno*	
SS *Klondike*	

Appendix 3

Canadian Parks Service National Market Survey Results. In 1987–88, Environment Canada conducted a national marketing survey to find out what Canadians think of their parks and historic sites, and how they might be best served.

The following profiles emerged. Twenty-six percent of the population are frequent users of national and provincial parks. These people are more likely to be young and male, and are more likely to be found in Western Canada. They prefer activity, adventure and challenge in the parks. They are relatively satisfied with what is traditionally offered, but would enjoy additional opportunities to make it easier to experience and understand the parks. They are the group most likely to enjoy camping, but would also like to have access to other types of simple accommodation. Distance and lack of awareness are barriers to visiting a greater number of parks in the system for people in this category.

Canadians favourably disposed towards parks but who visited less frequently, constitute 43% of the population. They are more heavily represented in Atlantic Canada, interested in traditional programs and services but generally want more structured activities and "tamer" experiences. They are interested in more varied accommodation options than the frequent visitors. Distance, lack of awareness, and lack of transportation or travelling companions, were further disincentives to visitation.

Canadians not favourably disposed to the idea of a park visit, especially to camping, constitute 25% of the population, are more likely to be female and older, and are more heavily represented in Quebec. Awareness and distance barriers exist for this group, but at much more pronounced levels than for frequent and light users. This group has important concerns about comfort, amenities, personal security, accommodation, and ancillary services and activities.

For National Historic Sites, frequent users represent 20% of the population. There are greater proportions of them in the 35–49 age group, and in Atlantic Canada. They are particularly interested in program and service enhancements that actively interpret Historic Sites to visitors and also provide personally involving experiences. Distance and lack of awareness are key barriers to more frequent visitation.

Canadians favourably disposed towards Historic Sites, but who visit them infrequently, make up 59% of the population. There are somewhat more females in this group, and about equal representation in all regions. Distance, a pronounced lack of awareness, and lack of transportation and travelling companions, discourage greater activity.

Environment Canada will respond to the needs of these groups by taking steps to improve satisfaction among frequent users; by fostering awareness and interest among light and current non-users favourable to parks and sites; and by selective initiatives to spark interest among the others.